

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS**

**GARRARD COUNTY
SUGAR CREEK ROAD
OVER EAST FORK SUGAR CREEK**

PLANS BY: ODELL, WRIGHT, MORGAN AND BROWN INC.
 DESIGNED BY: OEB
 CHECKED BY: RJK
 TRACED BY:

PLANS UPDATED 8-13-73 J WOOD
 2-15-74 JK
 5-20-74 JbW

PLANS BY: ODELL, WRIGHT, MORGAN AND BROWN INC.
 DESIGNED BY: OEB
 CHECKED BY: RJK
 TRACED BY:

REFERENCE AND ESTIMATE OF QUANTITIES

| ITEM | SHEET NO. | CONCRETE CU. YD. | | REINF. STEEL LB. | STR. EXC. CU. YD. | | BRONZE PLATES LB. | LINSEED OIL PROT. COATING SQ. YD. | STRUCTURAL STEEL LUMP SUM BID ① | HIGH STR ALUMINUM HANDRAIL LIN. FT. |
|---------------------------|-----------|------------------|----------|------------------|-------------------|------|-------------------|-----------------------------------|---------------------------------|-------------------------------------|
| | | CL. 'A' | CL. 'AA' | | COM. | S.R. | | | | |
| QUANTITIES | 1 | | | | | | | | | |
| NOTES | 2 | | | | | | | | | |
| LAYOUT & SOUNDINGS | 3,4 | | | | | | | | | |
| ABUTMENT 1 | 5-8 | 88.2 | | 11,845 | 105 | 35 | | | | |
| ABUTMENT 2 | 8-11 | 79.6 | | 10,911 | 135 | 35 | | | | |
| PIER 1 | 12 | 28.0 | | 3,795 | 25 | 5 | | | | |
| SUPERSTRUCTURE ELEVATIONS | 13-15 | 173.9 | | 46,175 | | | 608 | 375 | ① | 180.2 |
| SUPERSTRUCTURE TOTALS | | 173.9 | | 46,175 | | | 608 | 375 | ① | 180.2 |
| SUBSTRUCTURE TOTALS | | 195.8 | | 26,351 | 325 | 75 | | | | |
| TOTALS | | 195.8 | 173.9 | 72,726 | 325 | 75 | 608 | 375 | ① | 180.2 |

① Approximate weight of Structural Steel is 1703 Lb.

REFERENCES

The References Listed Below are the Current Edition and are to be used with these Plans.

- Special Provision No 8B for Linseed Oil Protective Coating
- Special Provision No 30B for Membrane Curing of Concrete Structures
- Special Provision No 35B for Class AA Concrete
- Special Provision No 36A for Set-Retarding Admixtures for Concrete
- Special Provision No 37D for Preformed Compression Joint Seals

- Special Provision No 80B for Blast Cleaning and Painting Structural Steel
- Special Provision No 99A for Concrete Surface Finish
- Special Provision No 102 for Coarse Aggregates

- BJE-001-01 BJE-002-01 RBC-001-01 BHA-005-01
- BHA-006-01 BJJ-003 BJJ-004 BGX-006

| ITEM | NO. | SIZE & LOCATION |
|---------------------------|-----|---------------------------------------------|
| Prem. Cork Exp. Jt. Matl. | 1 | 1/2" x 1" x 6" x 21'-0" Total @ Abut. Wings |
| " " " " " | 2 | 3/4" x 1-5/8" x 2'-8" Between Curbs |
| " " " " " | 1 | 1/2" x 6'-7" x 32'-0" Spans |
| " " " " " | 1 | 1/4" x 3'-0" x 33'-0" Over Pier Cap |
| Preformed Jt. Seal | 1 | 39'-6" long x 1/4" x 1 1/2" Seal @ Pier |
| 4 Bolt Insert Assembly | 4 | See Std. Drwg. RBC-001, Current Ed. |

NOTE:

Quantities shown in Bill of Incidental Material are approximate only and the contractor is responsible for furnishing enough material to complete the work according to plans and specifications. The cost of these items is to be included in the unit price bid for Class "AA" Concrete.

SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 1 OF 16

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

STATION 10+22.00 PROJECT NO. RL 40-886+1L
 BRIDGE NUMBER *RS 40-886* DRAWING NO. 17047 INDEX

| | | | | |
|-------------|------------|------|---------|------|
| DESIGNED BY | CHECKED BY | DATE | REVISED | DATE |
| TRACED BY | CHECKED BY | DATE | REVISED | DATE |
| | | | | |

GENERAL NOTES

NOTE: ALL REFERENCES TO THE FORMER DEPARTMENT OF HIGHWAYS AND ANY OF ITS DIVISIONS OR AGENTS WHICH ARE MENTIONED IN THE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, SPECIAL NOTES, ETC., SHALL APPLY TO THE CURRENT KENTUCKY DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAYS, AND ANY OF ITS DIVISIONS OR AGENTS.

SPECIFICATIONS: KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS, CURRENT EDITION WITH REVISIONS.

DESIGN LOAD: BRIDGE DESIGNED FOR H20-44 LOADING. SLAB DESIGNED FOR 16 KIP WHEEL LOAD.

REINFORCEMENT: DIMENSIONS SHOWN FROM FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS.

BEVELED EDGES: ALL EXPOSED EDGES SHALL BE BEVELED 7/8" UNLESS OTHERWISE SHOWN.

CORNER EXPANSION JOINT MATERIAL, TAR PAPER, PRECURED JOINT SEAL:

FOUNDATION PRESSURE: THE COST OF THESE ITEMS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "AA" CONCRETE.

CONCRETE: THE MAXIMUM FOOTING PRESSURE IS 80% FOR GROUP I LOADS @ PIER AND 6 1/2% @ ABUTMENTS.

WIND LOADS: CLASS "A" CONCRETE IS TO BE USED IN ABUTMENTS AND PIERS.

CONSTRUCTION IDENTIFICATION: CLASS "AA" CONCRETE IS TO BE USED IN THE SUPERSTRUCTURE.

WILL TEST REPORTS: THIS STRUCTURE IS DESIGNED USING WIND LOADS BASED ON A WIND VELOCITY OF 84 M.P.H. THE NAMES OF THE PRIME CONTRACTOR AND THE SUBCONTRACTOR SHALL BE IMPRINTED IN THE CONCRETE WITH ONE INCH LETTERS AT A LOCATION DESIGNATED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ALL PLANS, EQUIPMENT, AND LABOR NECESSARY TO DO THE WORK, FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

DESIGN STRESSES: NOTARIZED WILL TEST REPORTS IN TRIPLICATE SHALL BE FURNISHED THE KENTUCKY DEPARTMENT OF HIGHWAYS SHOWING THAT ALL MATERIALS FURNISHED CONFORM TO THE SPECIFICATIONS.

FOR CLASS "AA" REINFORCED CONCRETE

$f_s = 20,000$ PSI

$f_c = 1,600$ PSI FOR OTHER THAN SLABS

$f_c = 1,200$ PSI FOR DECK SLABS

$A = 200$ PSI FOR EMBEDMENT

$A = 300$ PSI FOR SUM OF PERIMETERS

$f'_c = 4,000$ PSI

$N = 8$

$N = 10$

STRUCTURAL STEEL: "LUMP SUM BID" FOR STRUCTURAL STEEL SHALL BE FULL PAYMENT FOR ALL STRUCTURAL STEEL, CAST IRON DRAINS, WELDING AND WELDING MATERIALS, PAINT AND ALL LABOR AND MATERIALS NECESSARY TO ERECT THE STEEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. USE ASTM A36 CURRENT SPECIFICATIONS.

PAINT: ALL STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISION FOR BLAST CLEANING AND PAINTING STRUCTURAL STEEL, CURRENT EDITION

TAR PAPER: TAR PAPER IS TO BE COMMERCIAL GRADE TAR PAPER OR ROOFING FELT APPROXIMATELY 1/16" THICK.

BRONZE BEARING PLATES: ALL BRONZE PLATES TO BE ASTM B22, ALLOY C, WITH SLIDING SURFACES FINELY POLISHED. MACHINE BOLTS ARE TO BE FURNISHED BUT ARE NOT INCLUDED IN THE WEIGHTS OF PLATES GIVEN. THE COST IS TO BE INCLUDED IN THE IN THE UNIT PRICE BID FOR PLATES.

LINSEED OIL PROTECTIVE COATING: THE PROTECTIVE COATING SHALL BE FURNISHED AND PLACED IN ACCORDANCE WITH *SPECIAL PROVISION NO. 8 B.

PLAN ELEVATION FOR FOOTINGS: WHEN SUITABLE ROCK IS ENCOUNTERED AT A DATUM ELEVATION HIGHER THAN THE PLAN ELEVATION, THE HIGHER ELEVATION MAY BE UTILIZED FOR BEARING AS OUTLINED IN THE SPECIFICATIONS.

HIGH STRENGTH ALUMINUM HANDRAIL: THE CONTRACTOR SHALL PROVIDE THROUGHOUT THE PROJECT HIGH STRENGTH ALUMINUM HANDRAIL IN ACCORDANCE WITH STANDARD DRAWINGS BHA-005, BHA-006, CURRENT EDITION

BLASTING NEAR ABUTMENT SITES: THE BEARING VALUE OF THE ROCK LOCATED UNDER THE PROPOSED BRIDGE ABUTMENTS MUST BE PRESERVED FROM DAMAGE BY BLASTING. BY CONCUSSION FROM BLASTING, OR BY EXCESSIVE BACKBREAKAGE. ANY INCREASES IN STRUCTURE COSTS CAUSED BY BLASTING DAMAGE TO THE BRIDGE FOUNDATIONS SHALL BE AN EXPENSE OF THE CONTRACTOR.

MEMBRANE CURING COMPOUND: WHITE PIGMENTED CURING COMPOUND SHALL BE APPLIED TO THE BRIDGE DECK IN ACCORDANCE WITH THE SPECIAL PROVISION, EXCEPT THAT THE MEMBRANE COMPOUND USED SHALL HAVE A RESINOUS BASE.

POURING SEQUENCE: POUR THE GIRDER STEM IN ONE CONTINUOUS OPERATION IN HORIZONTAL LAYERS FOR EACH GIRDER. POUR ENDWALLS AND DIAPHRAGMS WITH GIRDER STEM BY PROVIDING VERTICAL CONSTRUCTION JOINTS MIDWAY BETWEEN GIRDERS.

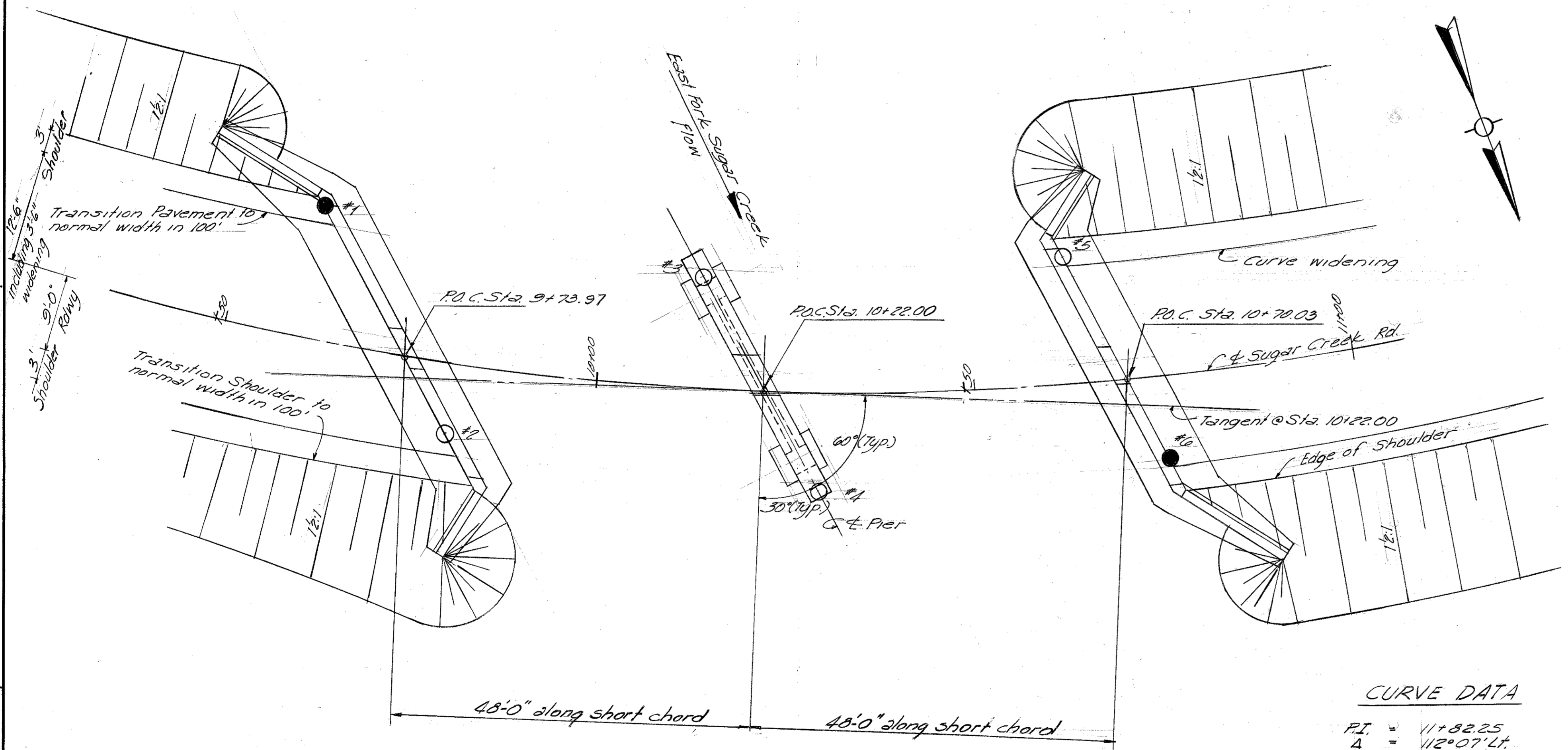
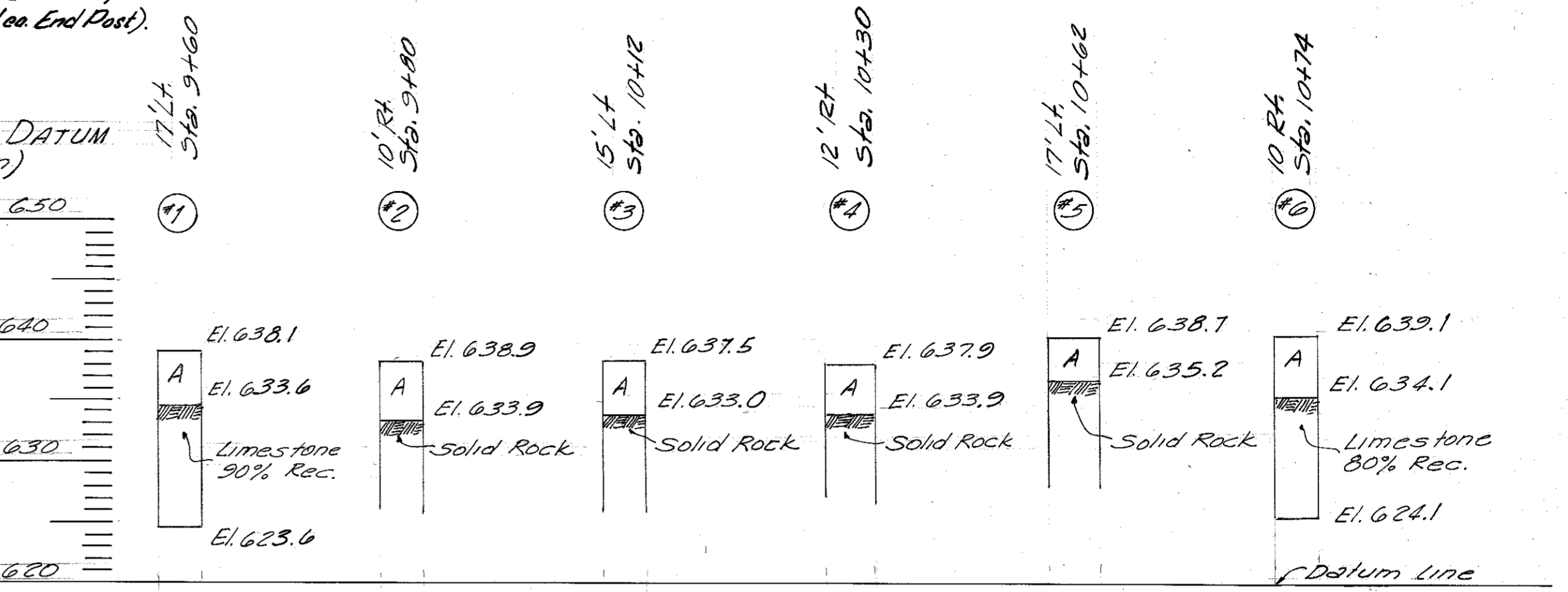
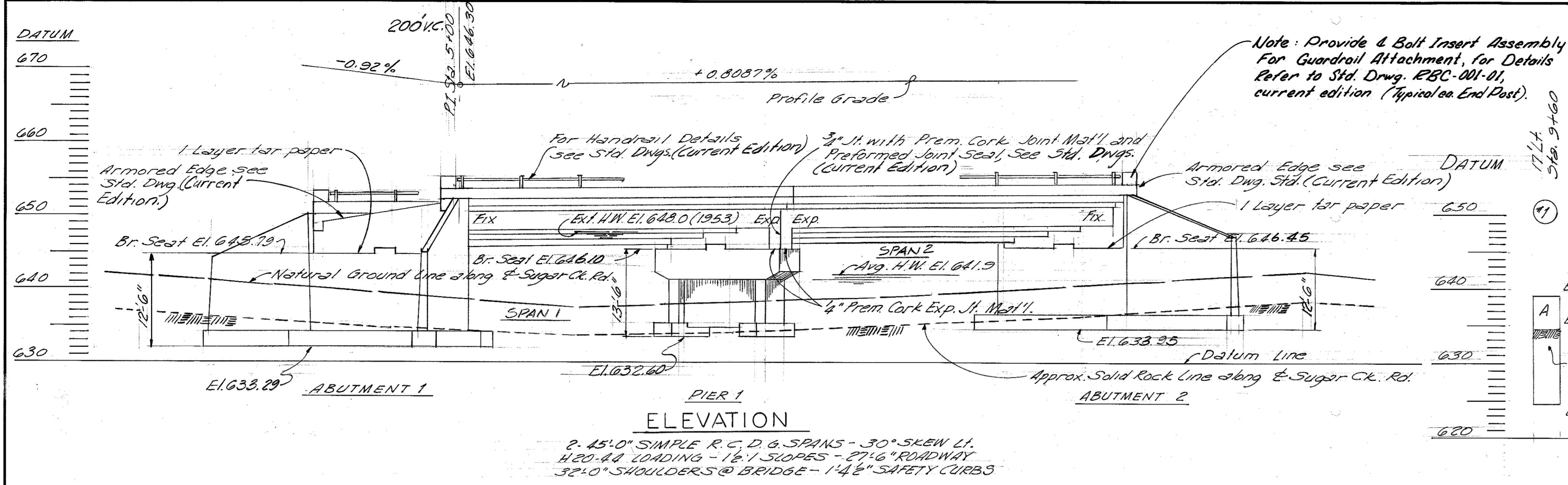
DRAIN DETAILS: FOUNDRY NOTE - ALL DRAINS SHALL BE GRAY IRON CASTINGS, ASTM A48, CURRENT EDITION, CLASS 30A. REPORT OF FIELD INSPECTION OF CASTINGS, CURRENT FORM, SHALL BE SUBMITTED TO THE DIVISION OF MATERIALS.

NOTES

| FED. ROAD DIST. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|-----------------|-------|--------------------|-------------|-----------|--------------|
| 7 | KY. | | | | |

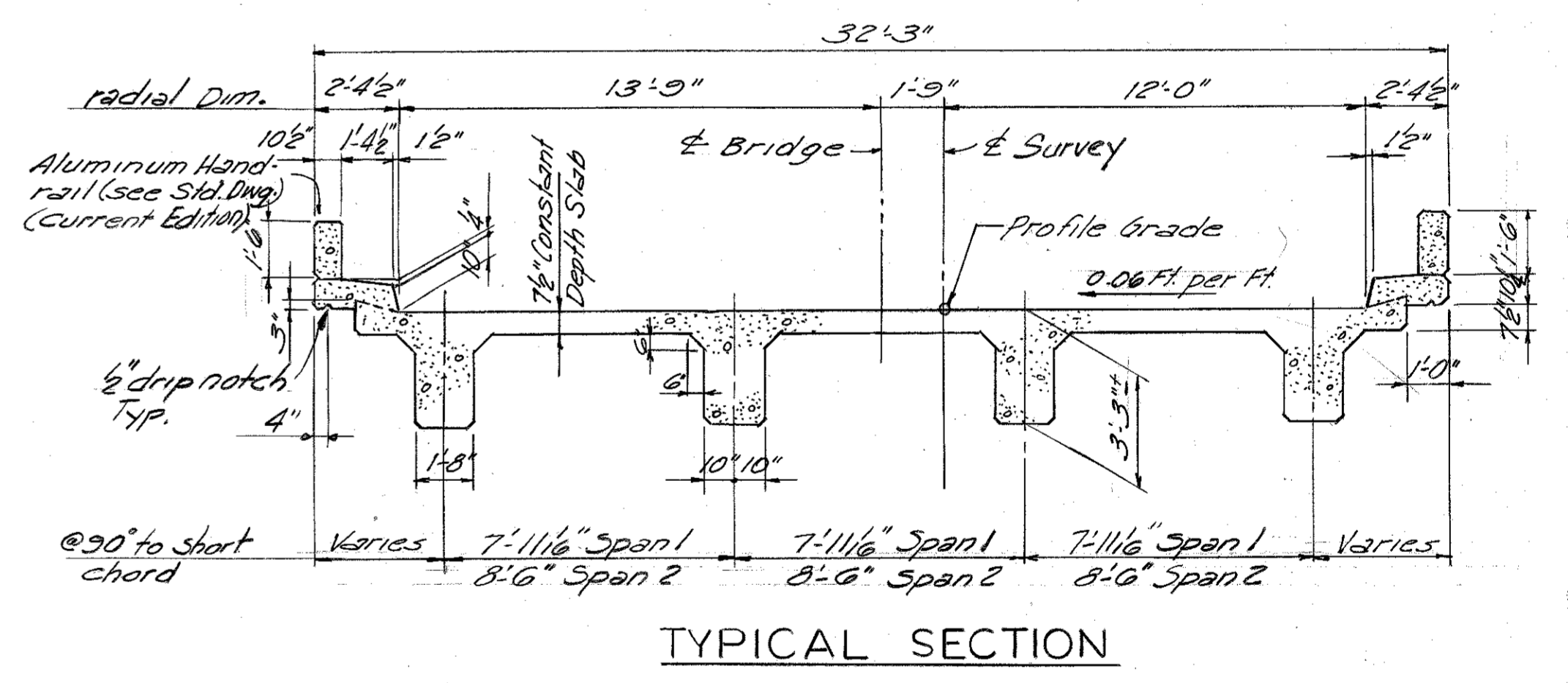
SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 2

| | |
|---------------------------------|-------------------|
| COMMONWEALTH OF KENTUCKY | |
| BUREAU OF HIGHWAYS | |
| FRANKFORT | |
| COUNTY OF | |
| GARRARD | |
| SUGAR CREEK | |
| ROAD | |
| STATION 10+22.00 | PROJECT NO. |
| BRIDGE NUMBER | DRAWING NO. 17047 |
| | INDEX |



CURVE DATA

| | | |
|---------|---|--------------|
| P.I. | = | 11+82.25 |
| A | = | 112° 07' Lt. |
| C | = | 14° 30' |
| T | = | 587.11' |
| L | = | 773.20' |
| SE | = | 3.5' |
| R. off. | = | See X-Sept. |
| R | = | 325.14' |
| E | = | 312.40' |
| R. out. | = | See X-Sept. |



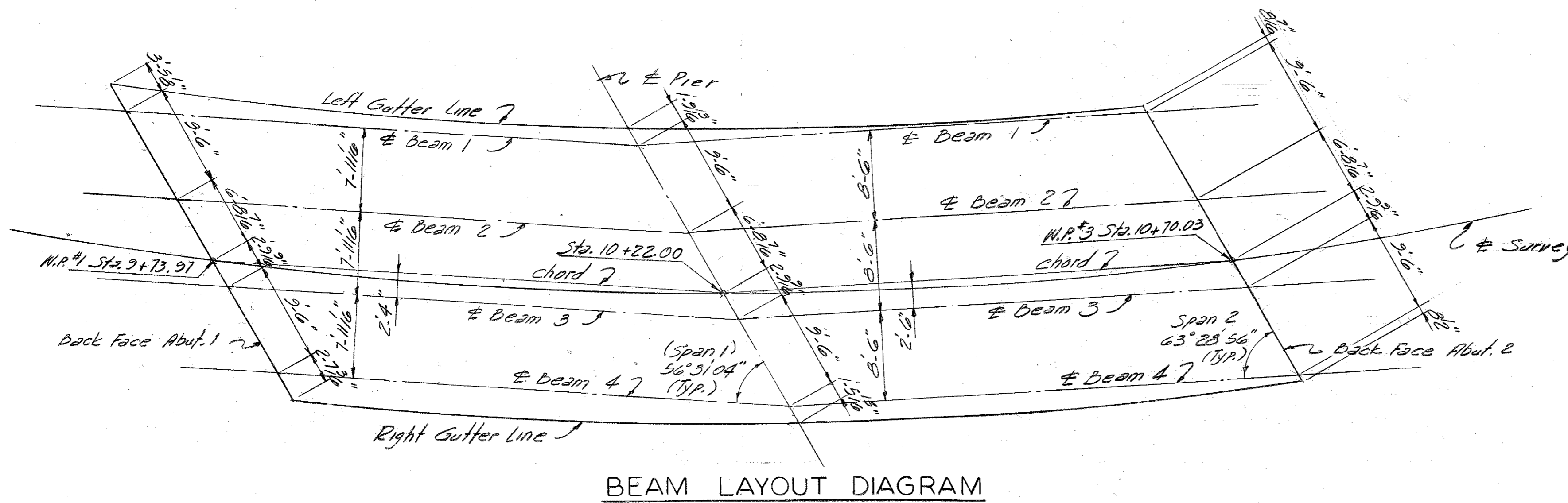
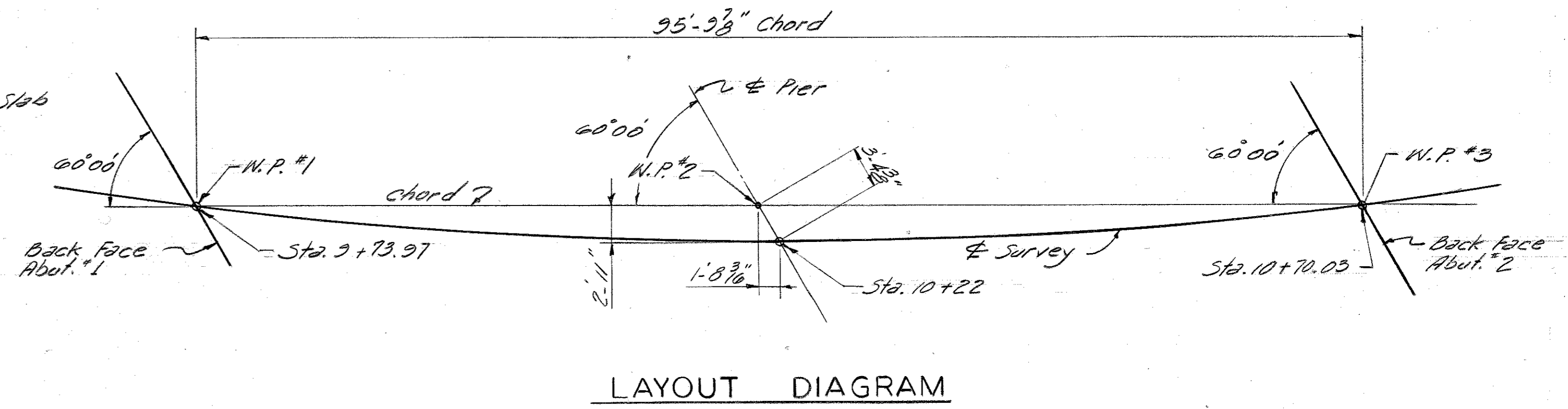
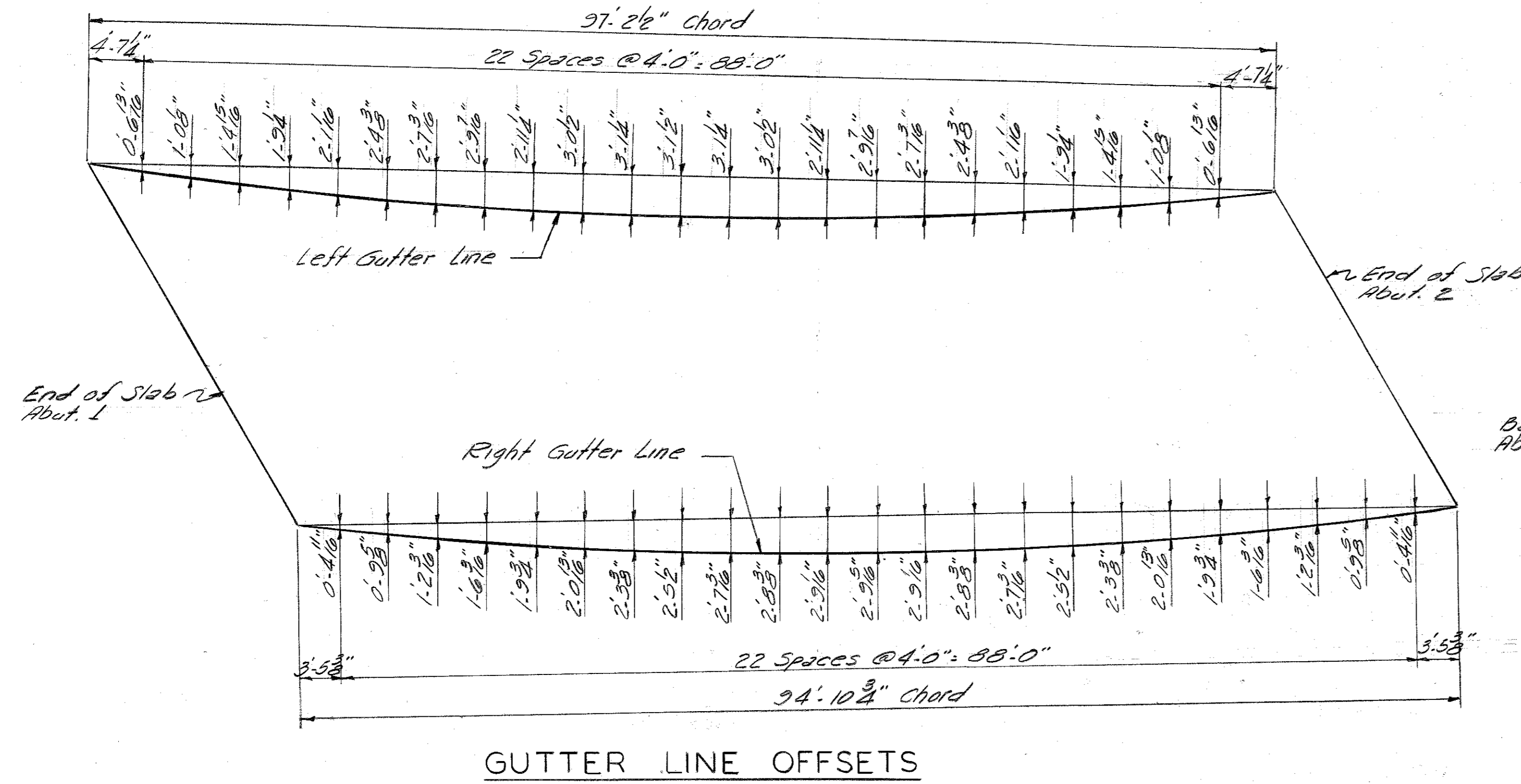
DESIGNED BY: *REW*
 CHECKED BY: *BEC*
 DATE: *11-1-67*

LAYOUT

SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 3

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 GARRARD
 SUGAR CREEK
 ROAD

STATION 10+22.00 PROJECT NO.
 BRIDGE NUMBER DRAWING NO. 17047 INDEX



LAYOUT DIAGRAMS

SUGAR CK. RD. OVER E. FORK SUGAR CK. SHEET 4

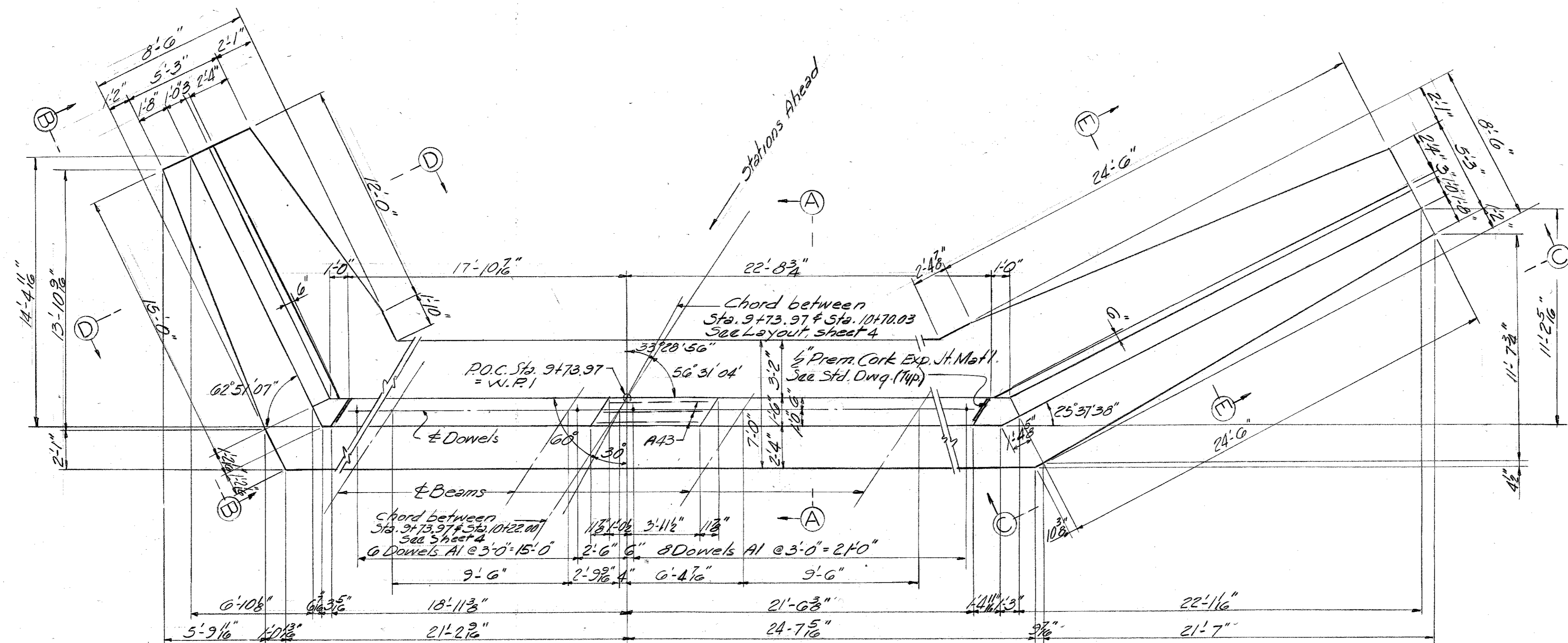
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 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

STATION 10+22.00 PROJECT NO. 17047

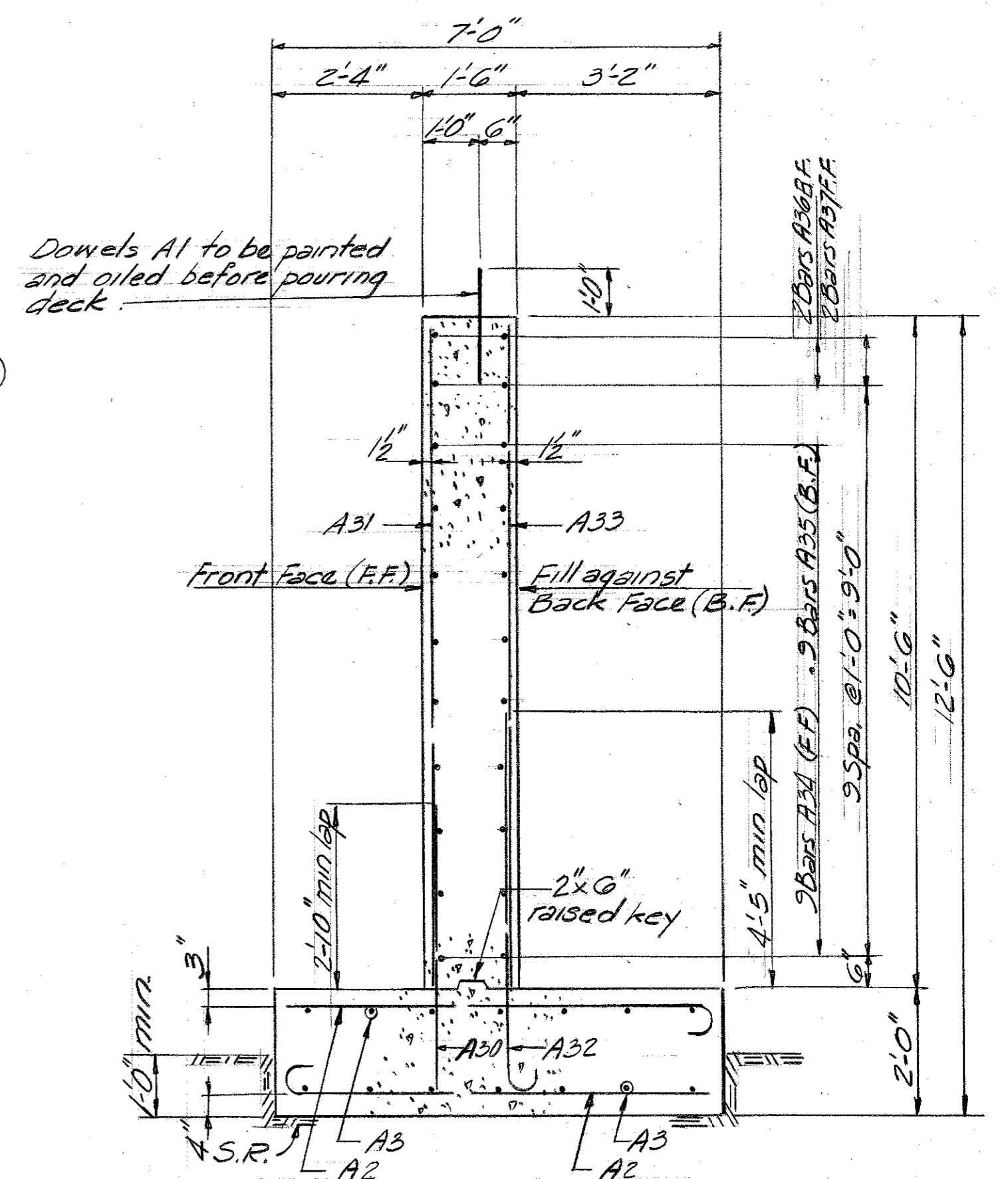
BRIDGE NUMBER DRAWING NO. 17047 INDEX

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 TRACED BY: _____ DATE: _____
 REVISIONS: _____ DATE: _____
 REVISIONS: _____ DATE: _____

2-9-16
 C.S.C.

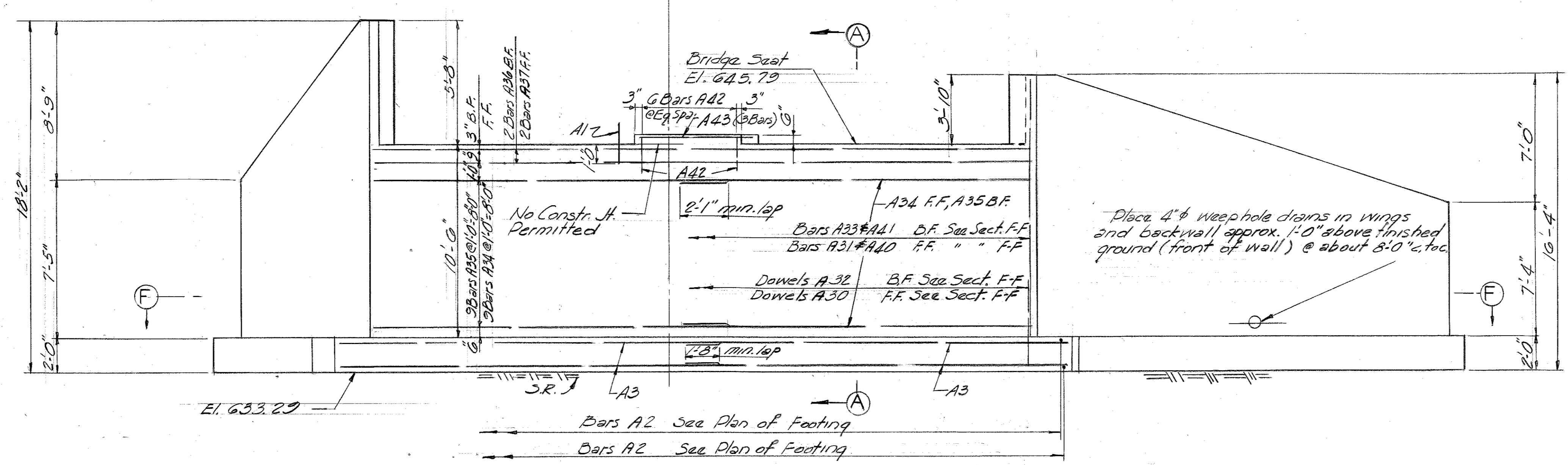


PLAN
(Showing Dimensions)



SECTION A-A

ESTIMATE OF QUANTITIES
 Concrete, Class A' 88.2 Cu.Yd.
 Reinforcement 11,845 Lb.



ELEVATION

DESIGNED BY: JED
 CHECKED BY: OEB
 TRACED BY: PW
 DATE: 5-67
 REVISIONS:
 DATE: 5-67
 DATE: 5-67

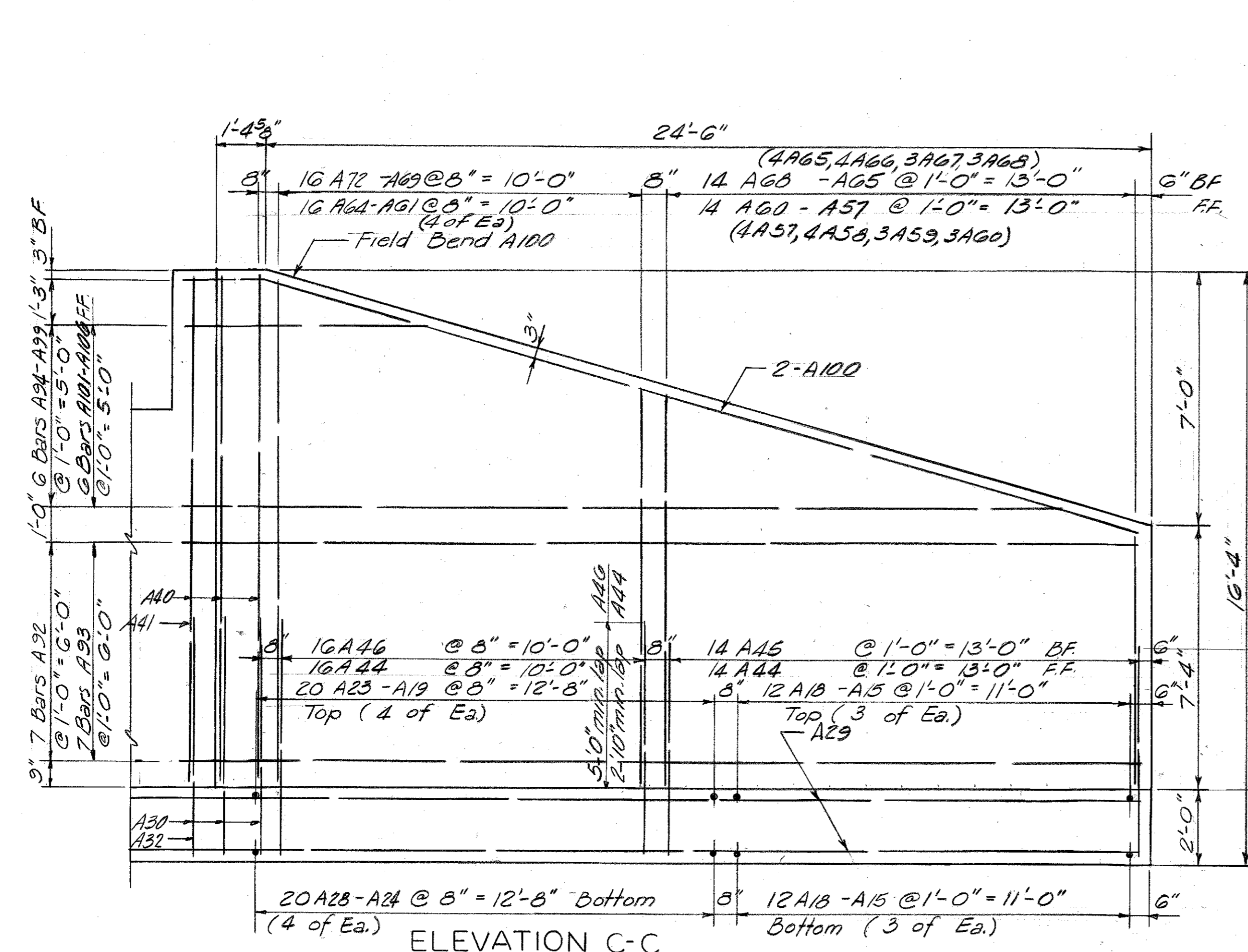
ABUTMENT NO. 1

SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 5

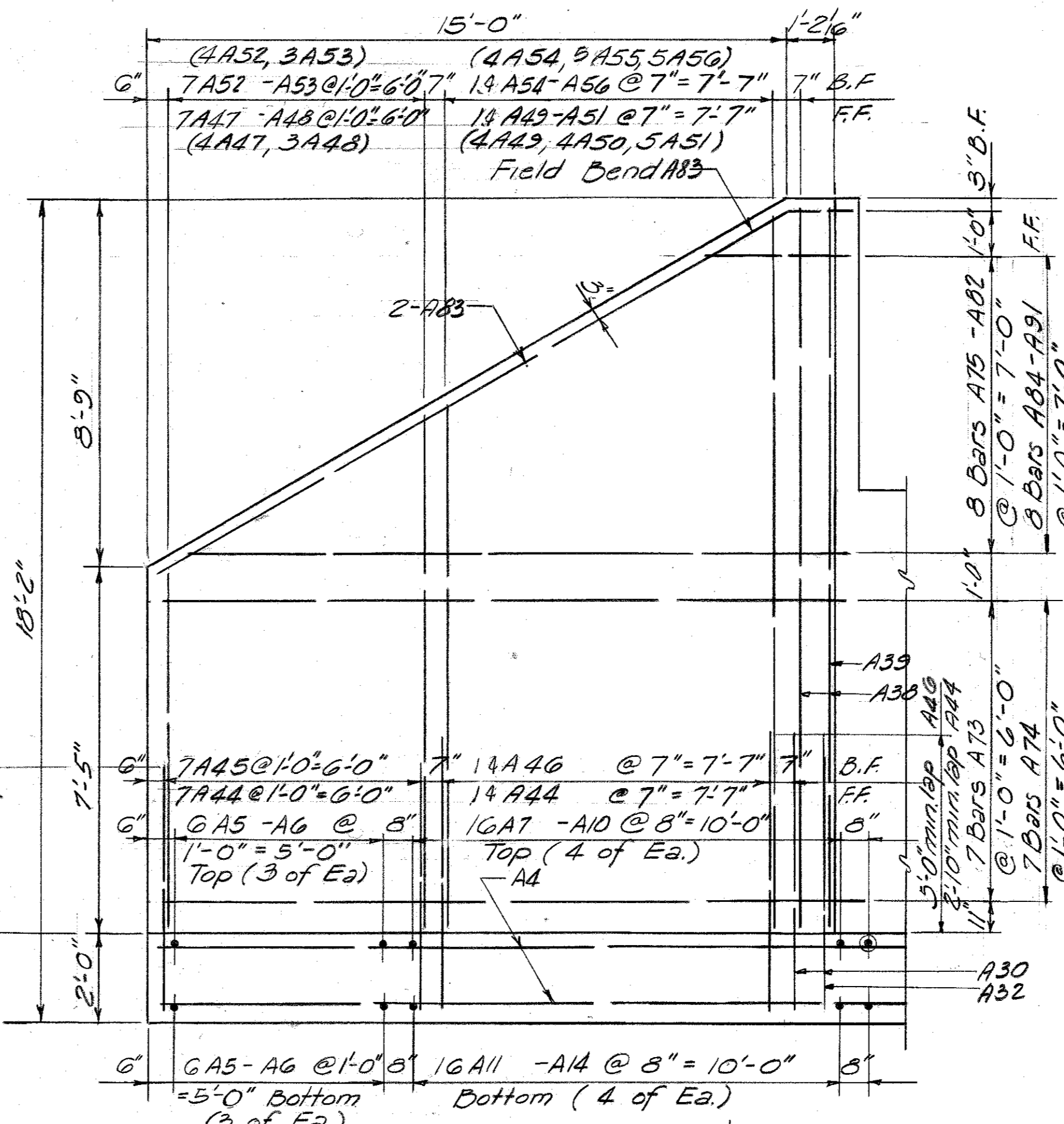
COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

STATION 10+22.00 PROJECT NO.
 BRIDGE NUMBER 17047 DRAWING NO. INDEX

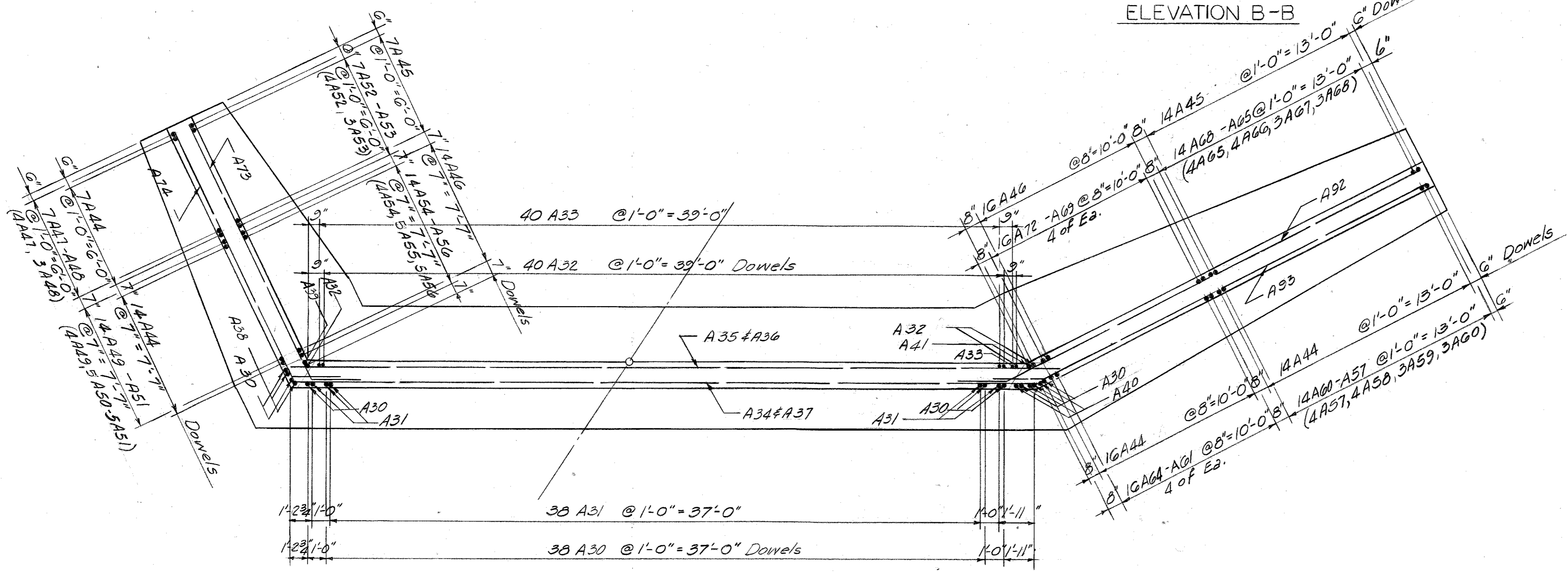
| FED. ROAD DIST. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|-----------------|-------|--------------------|-------------|-----------|--------------|
| 7 | KY. | | | | |



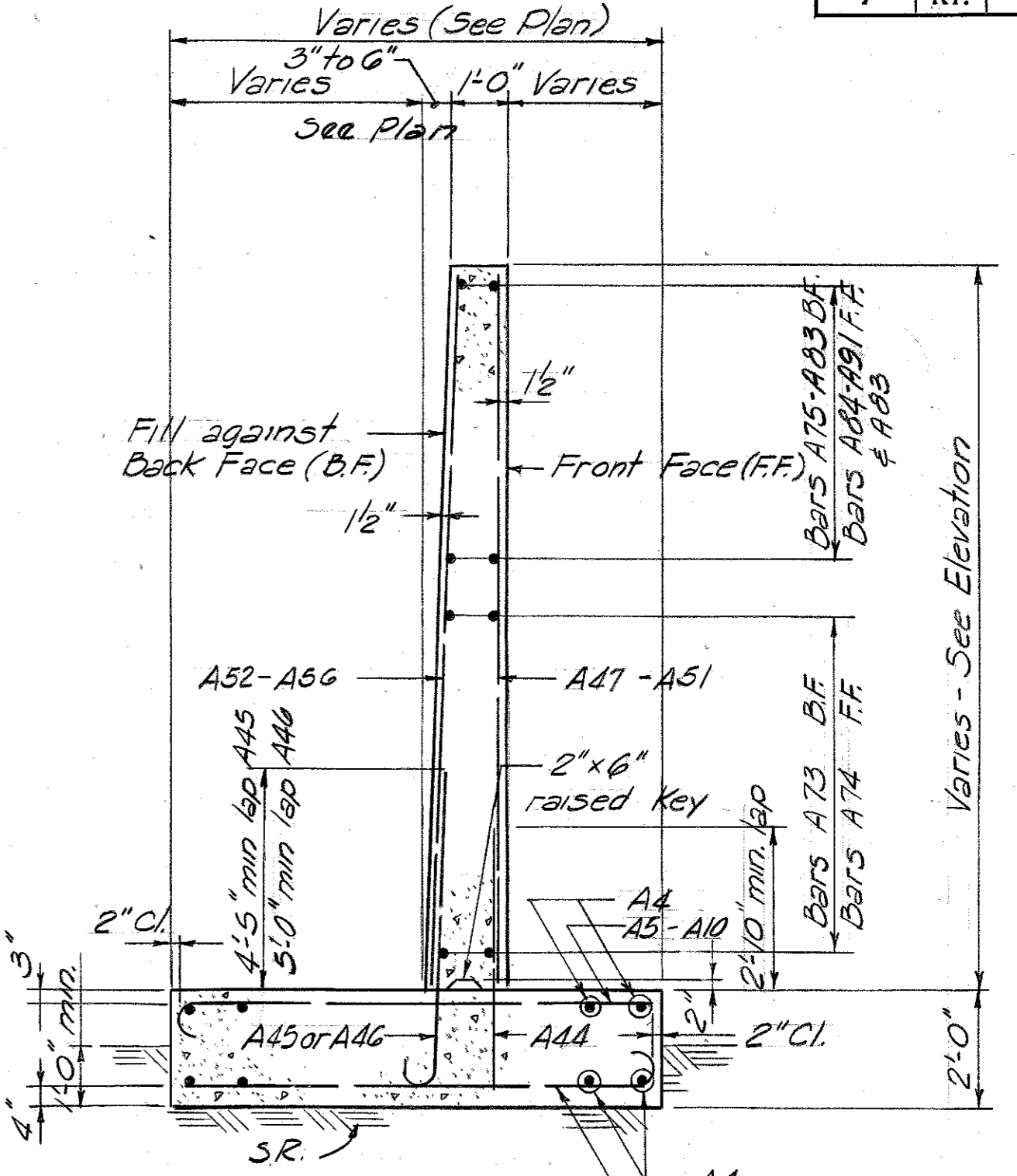
ELEVATION C-C



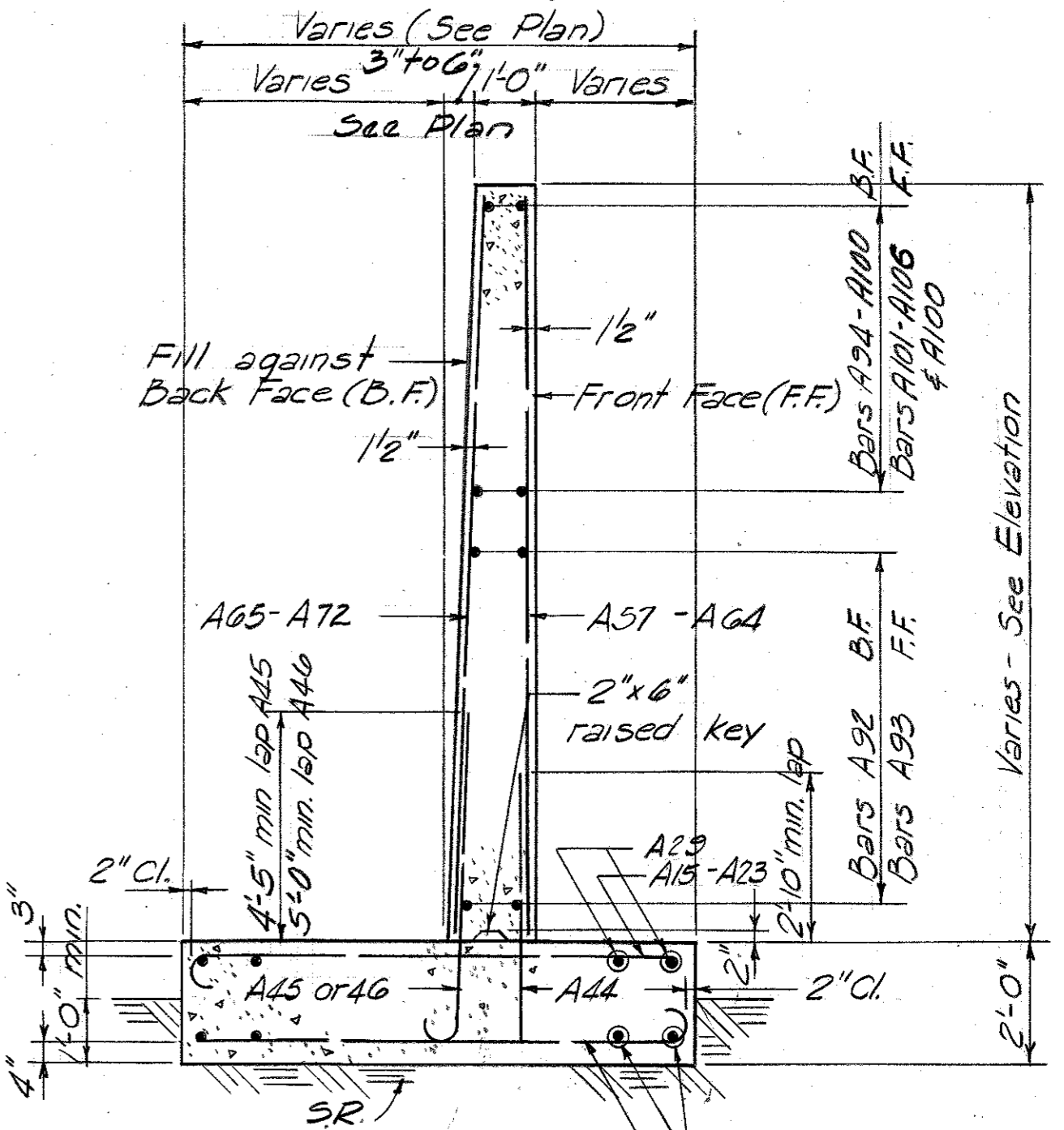
ELEVATION B-B



SECTION F-F



SECTION D-D (Thru Short Wing)



SECTION E-E (Thru Long Wing)

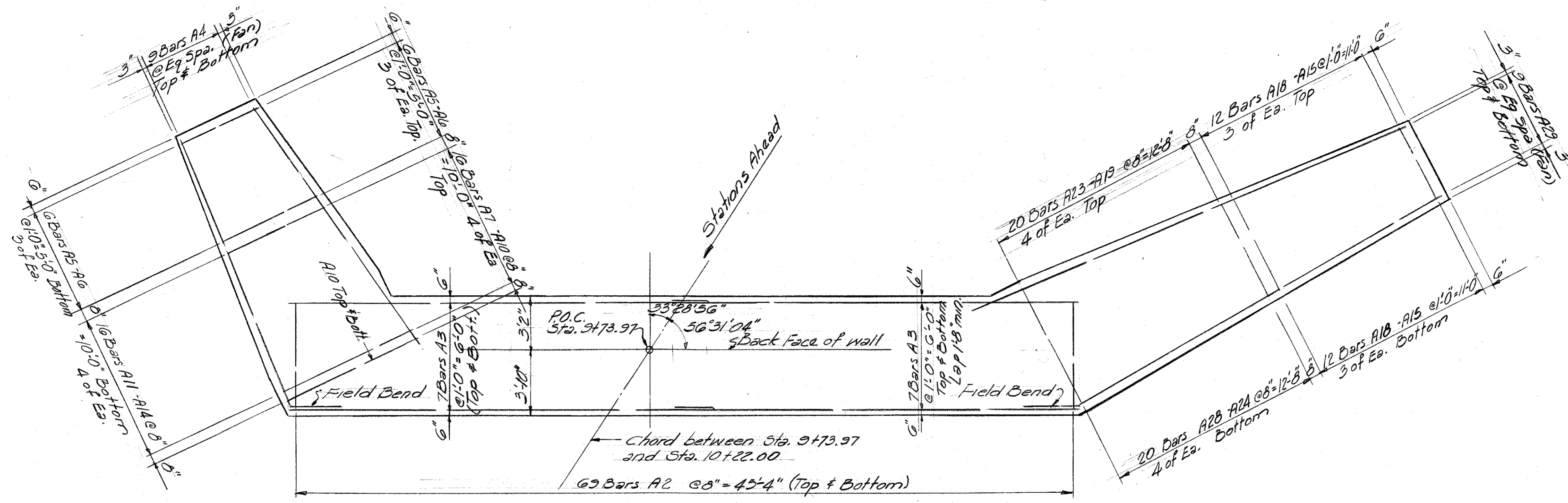
SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 6

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

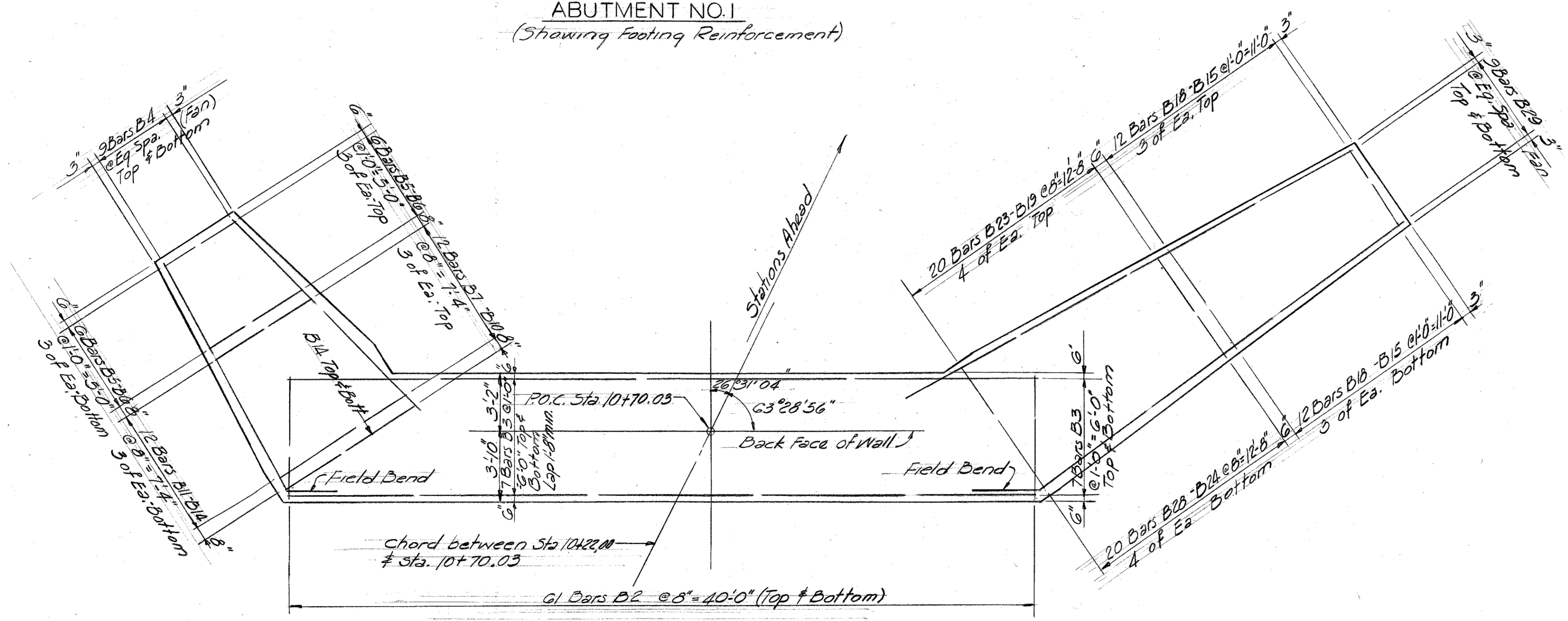
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|---------------|----------|-------------|-------|
| STATION | 10+22.00 | PROJECT NO. | |
| BRIDGE NUMBER | | DRAWING NO. | 17047 |
| | | INDEX | |

ABUTMENT NO. 1

DESIGNED BY: JEO
 CHECKED BY: JSM
 DATE: 5-67
 REVISIONS:
 DATE: 5-67
 CHECKED BY: JSM
 DATE: 5-67
 TRACED BY: JSM



PLAN OF FOOTING
ABUTMENT NO. 1
(Showing Footing Reinforcement)



PLAN OF FOOTING
ABUTMENT NO. 2
(Showing Footing Reinforcement)

| | | | |
|-------------|------|----------|------|
| DESIGNED BY | DATE | REVISION | DATE |
| CEB | | | |
| CHECKED BY | DATE | REVISION | DATE |
| PM | | | |
| TRACED BY | DATE | REVISION | DATE |
| | | | |

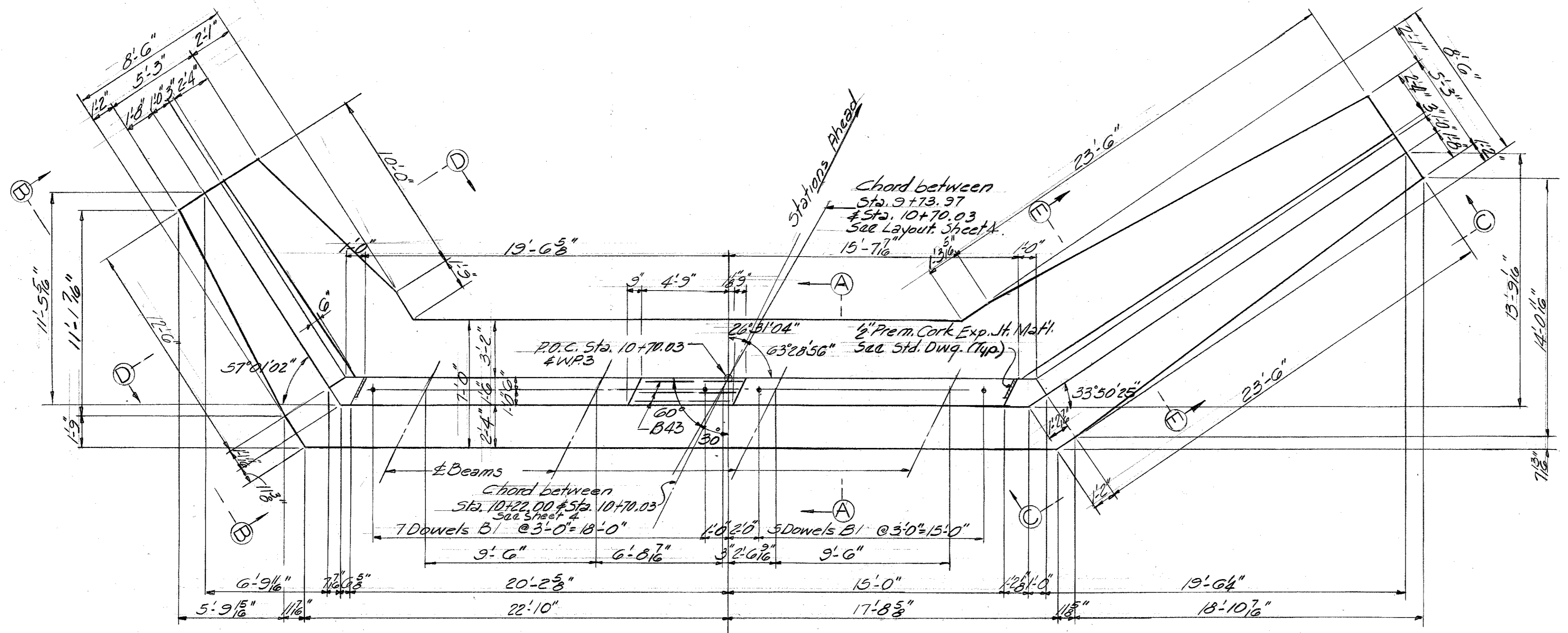
SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 8

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
GARRARD
SUGAR CREEK
ROAD

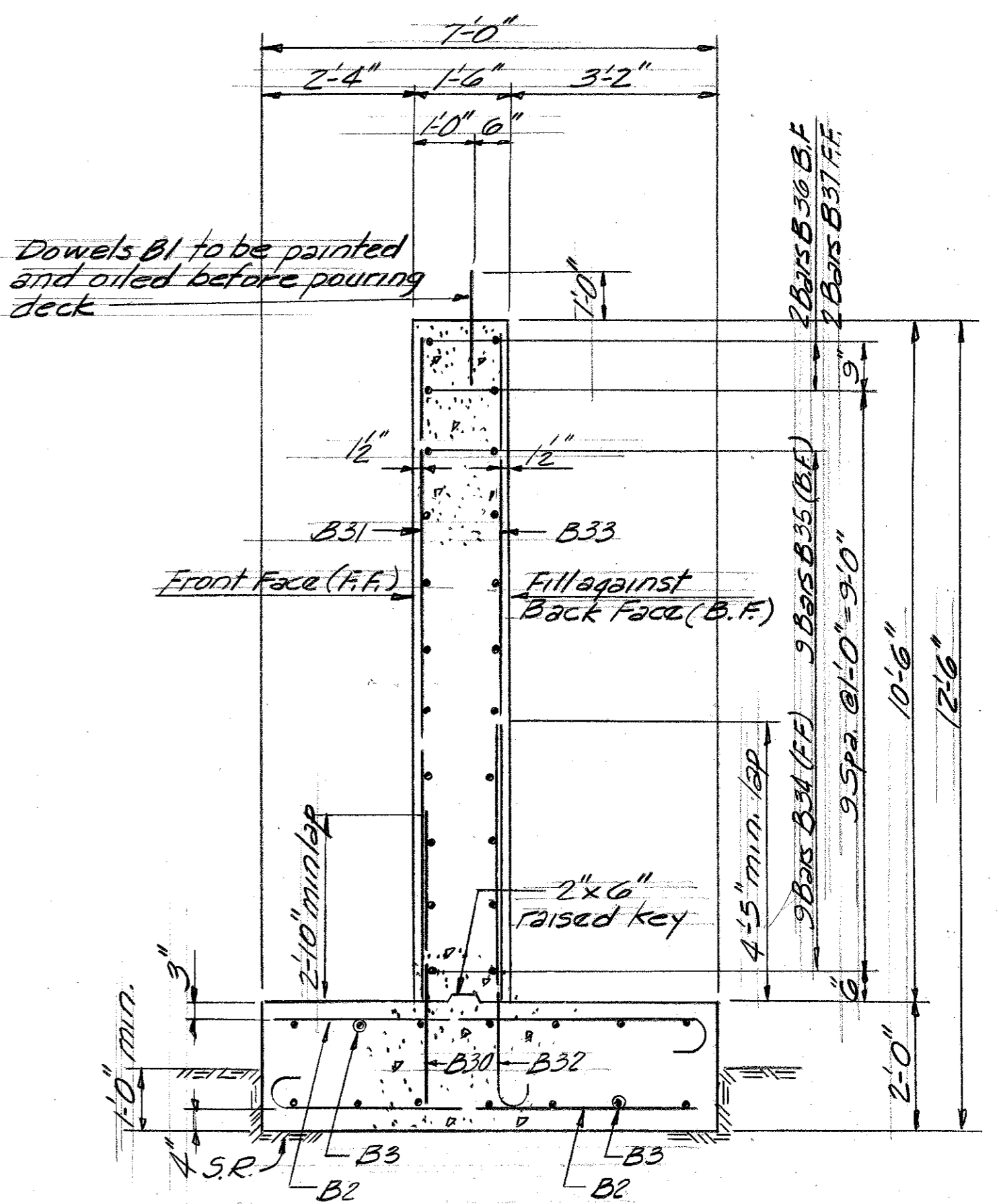
STATION 10+22.00 PROJECT NO.

| | | |
|---------------|-------------|-------|
| BRIDGE NUMBER | DRAWING NO. | INDEX |
| | 17047 | |

ABUTMENTS NO. 1 & NO. 2



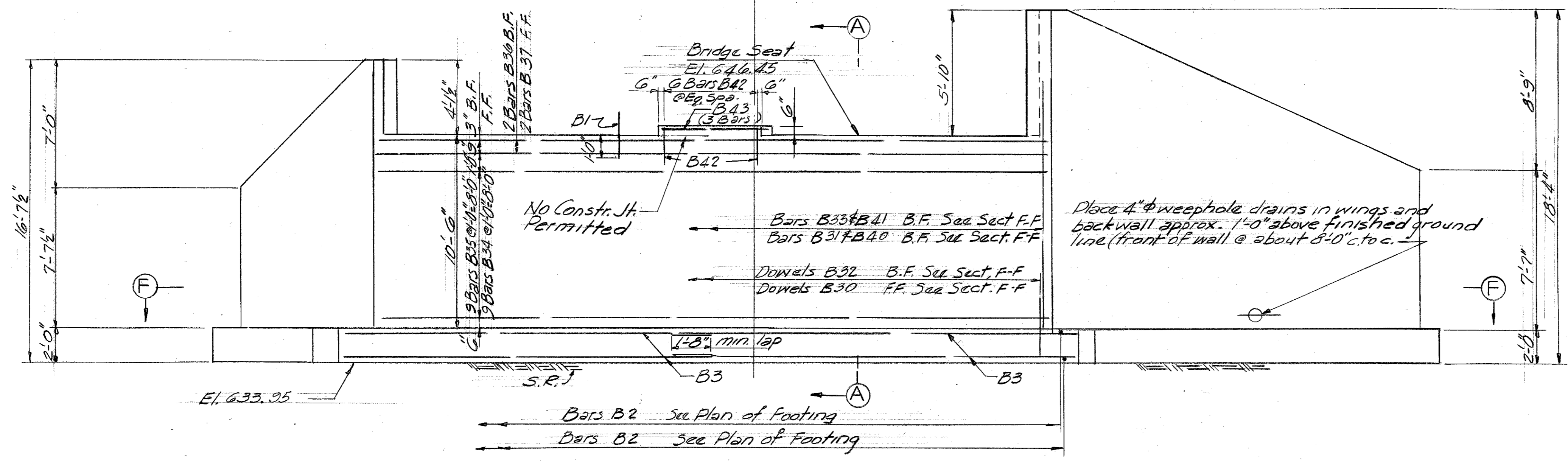
PLAN
(Showing Dimensions)



SECTION A-A

ESTIMATE OF QUANTITIES

| | | |
|---------------------|--------|---------|
| Concrete, Class 'A' | 13.6 | Cu. Yd. |
| Reinforcement | 10,311 | Lb. |



ELEVATION

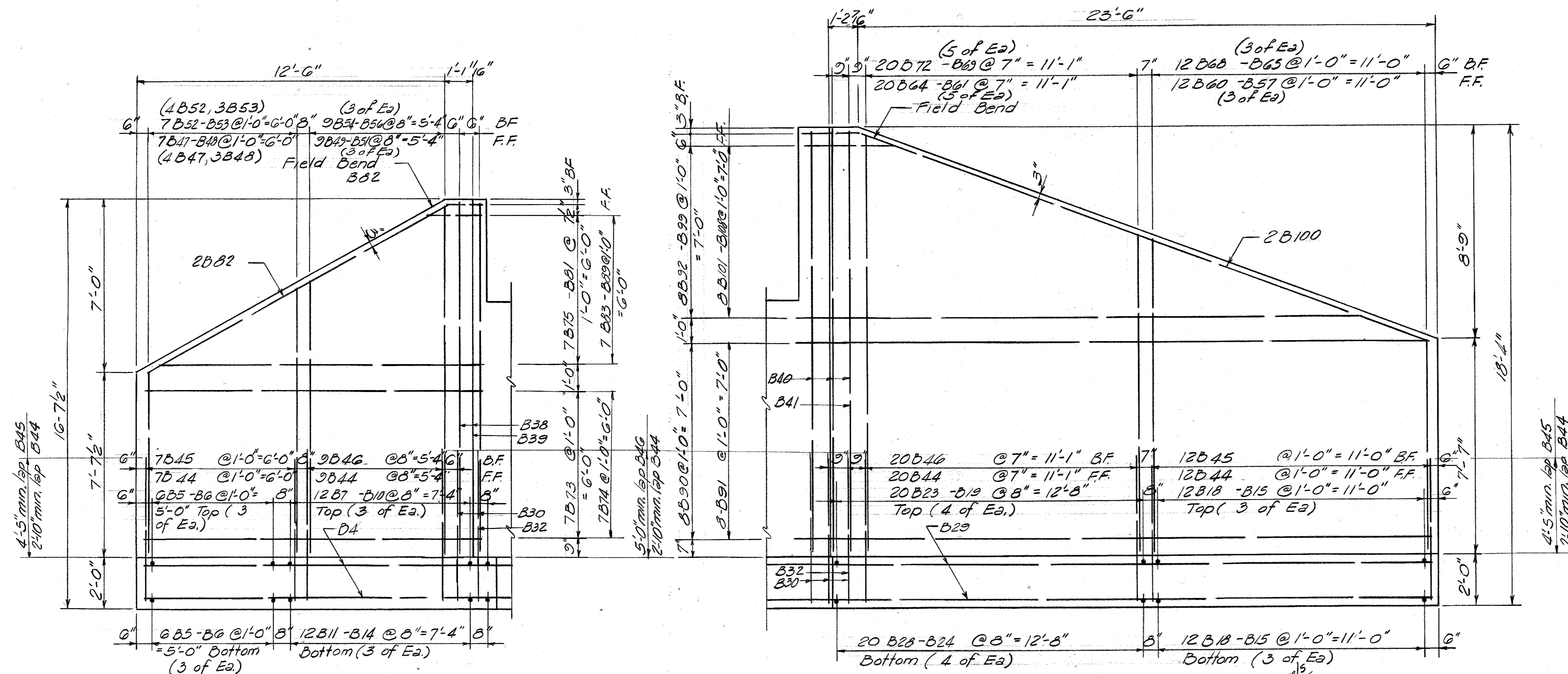
ABUTMENT NO. 2

DESIGNED BY: JRO
CHECKED BY: CFB
TRACED BY: PW
REVISIONS:
DATE: 5-67
DATE: 5-67
DATE: 5-67

SUGAR CREEK RD. OVER E. FORK SUGAR CREEK SHEET 9

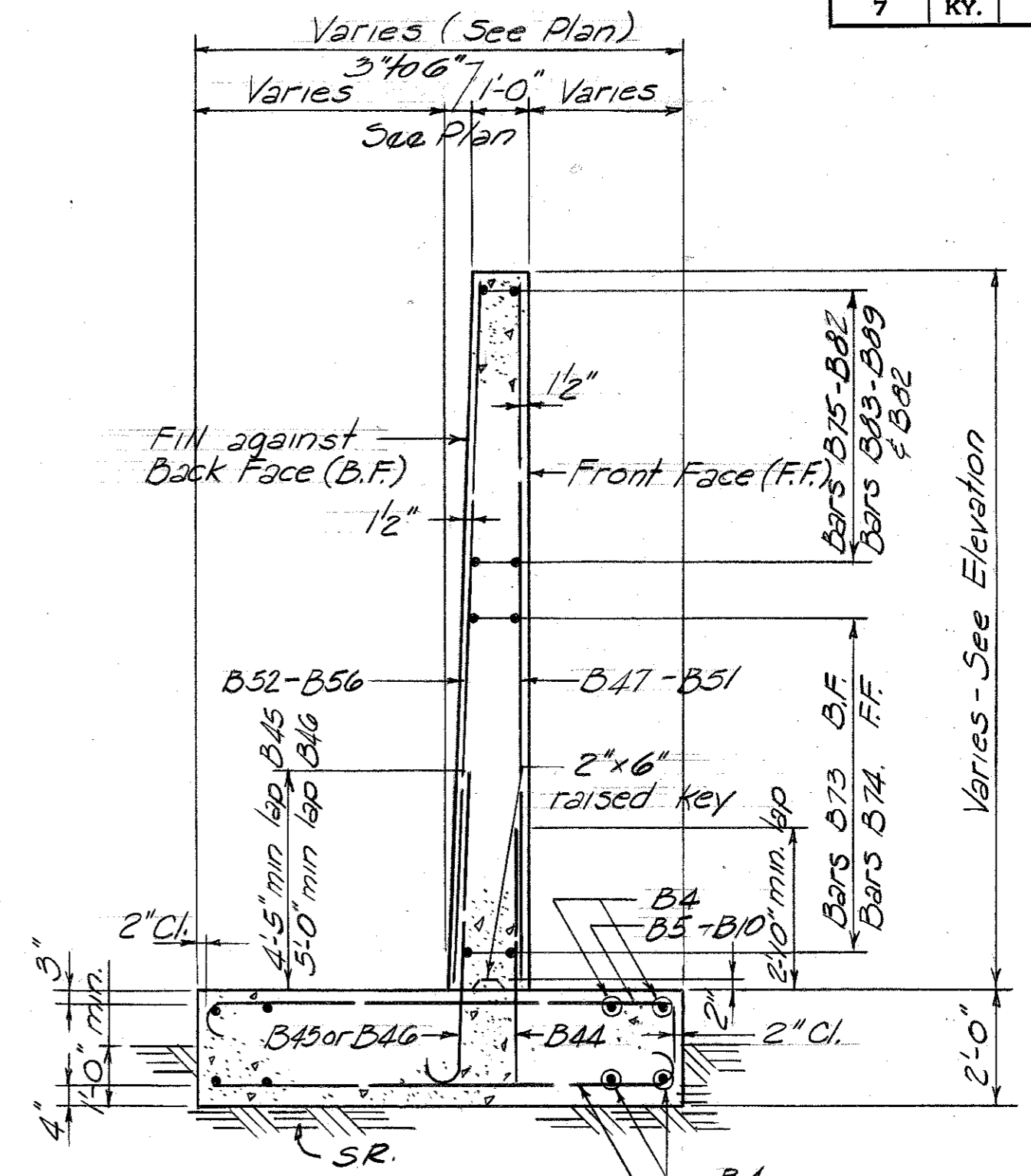
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
GARRARD
SUGAR CREEK
ROAD

| | | | |
|---------------|----------|-------------|-------|
| STATION | 10+22.00 | PROJECT NO. | |
| BRIDGE NUMBER | | DRAWING NO. | 17047 |
| | | INDEX | 9 |

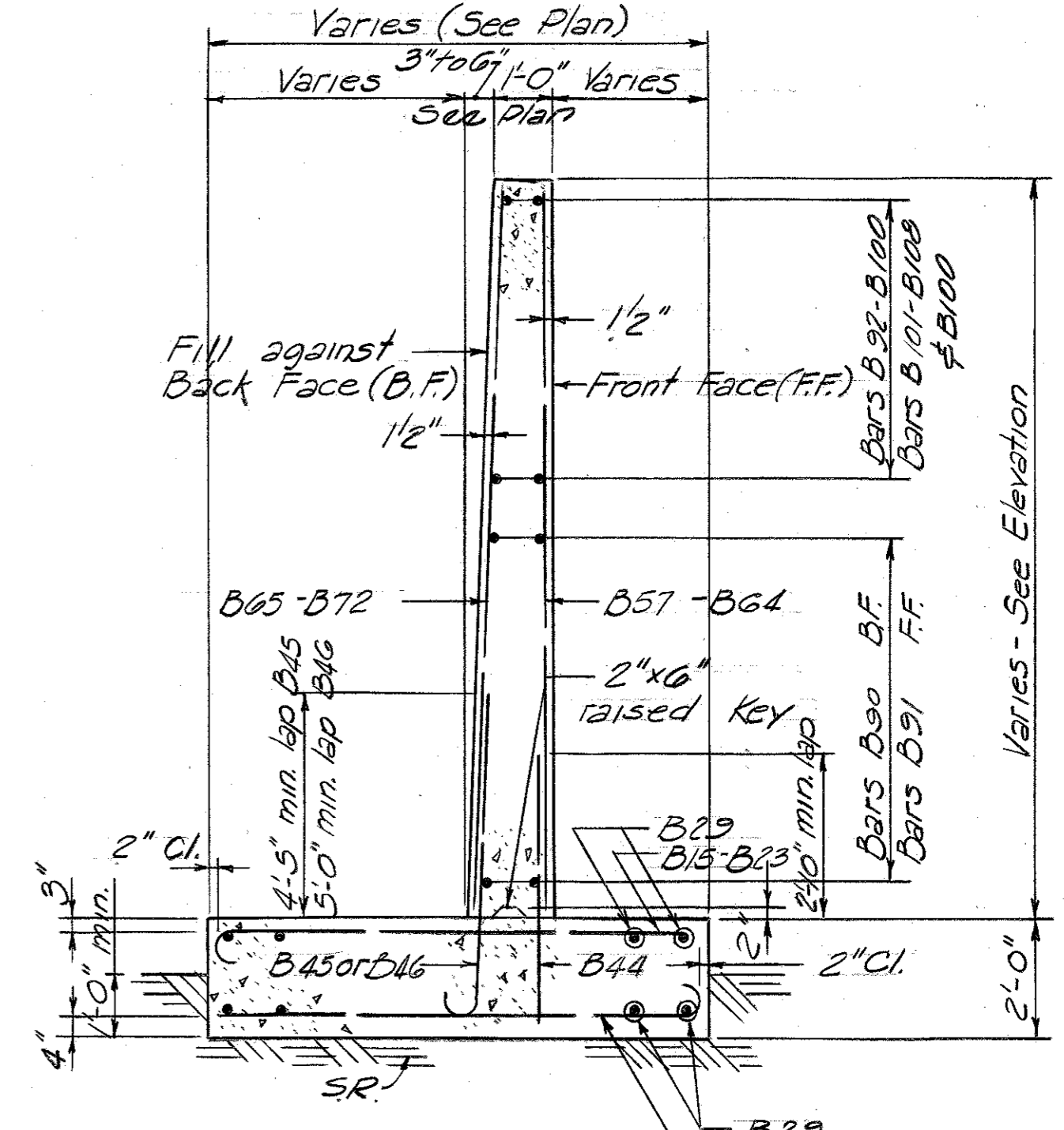


ELEVATION B-B

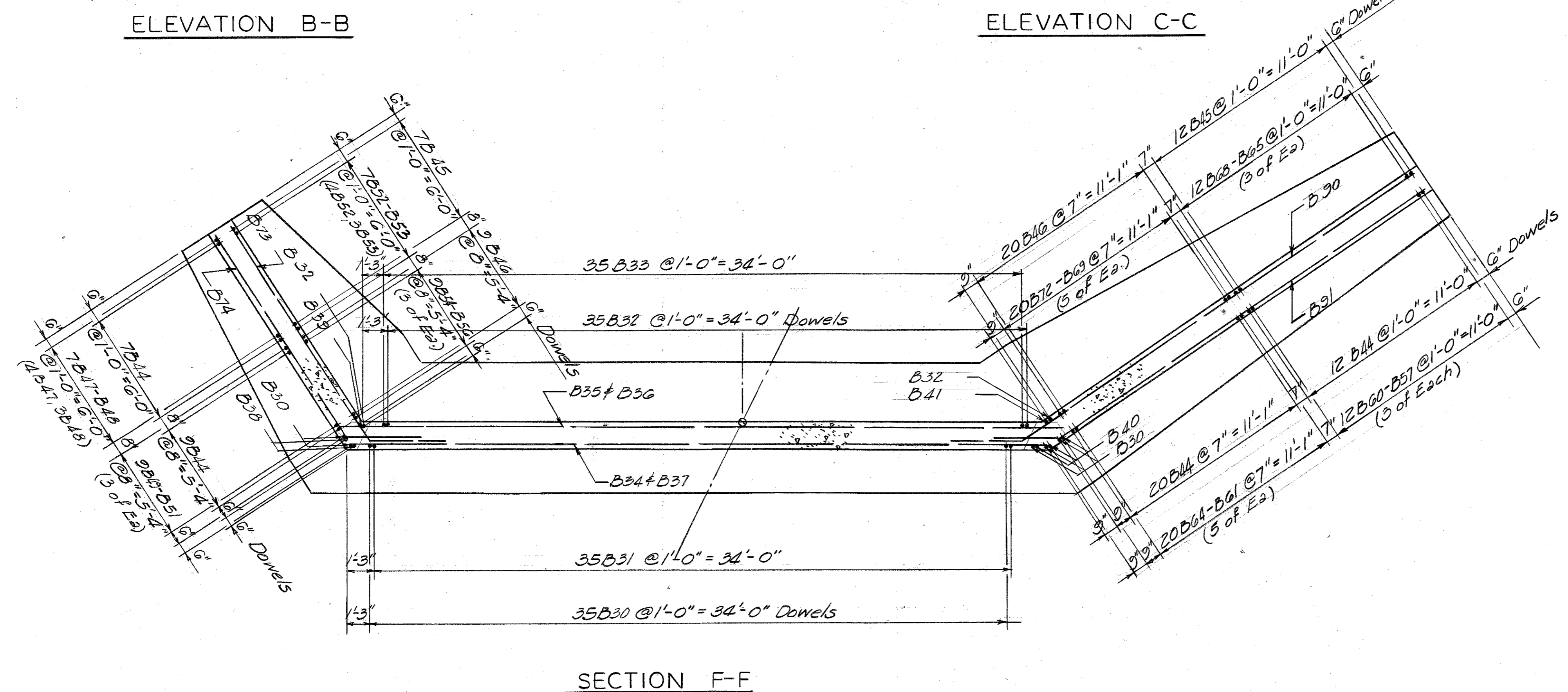
ELEVATION C-C



SECTION D-D
(Thru Short Wing)



SECTION E-E
(Thru Long Wing)



SECTION F-F

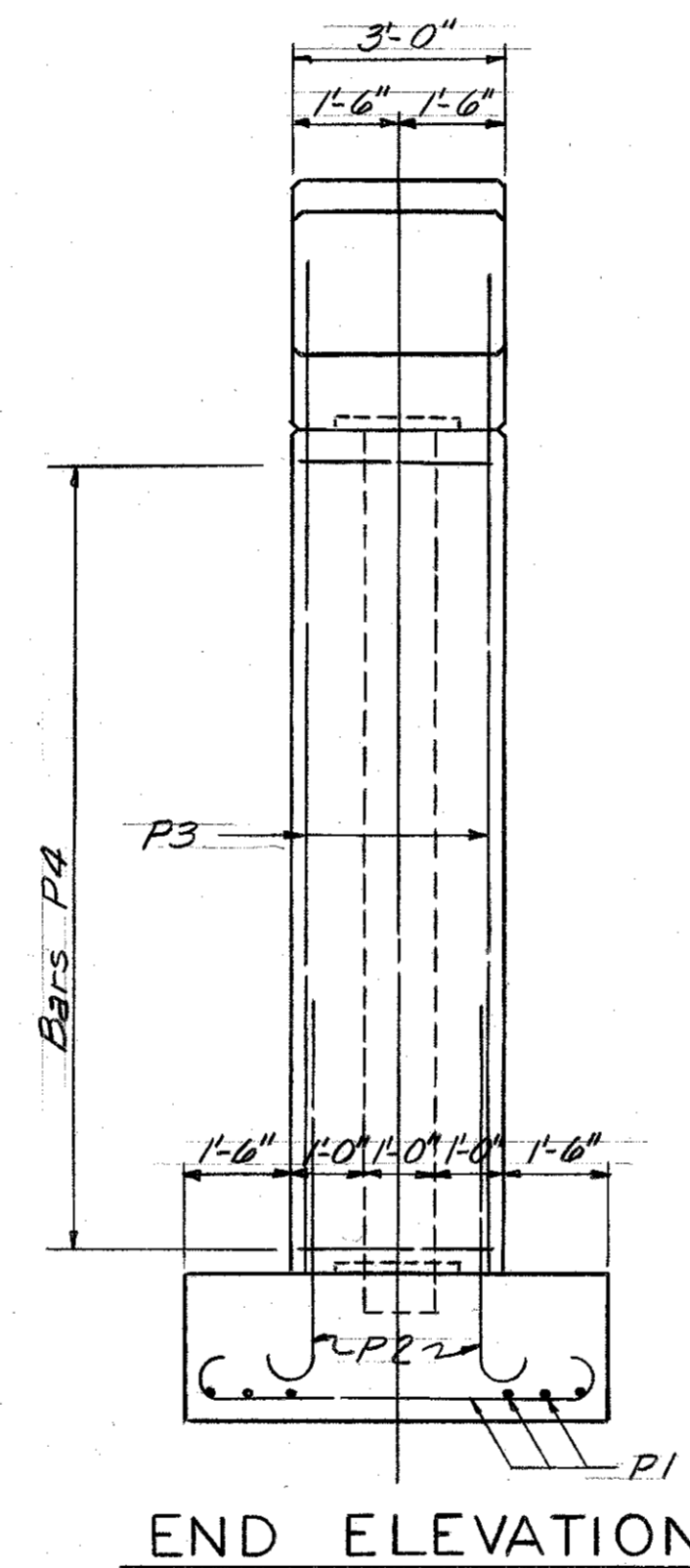
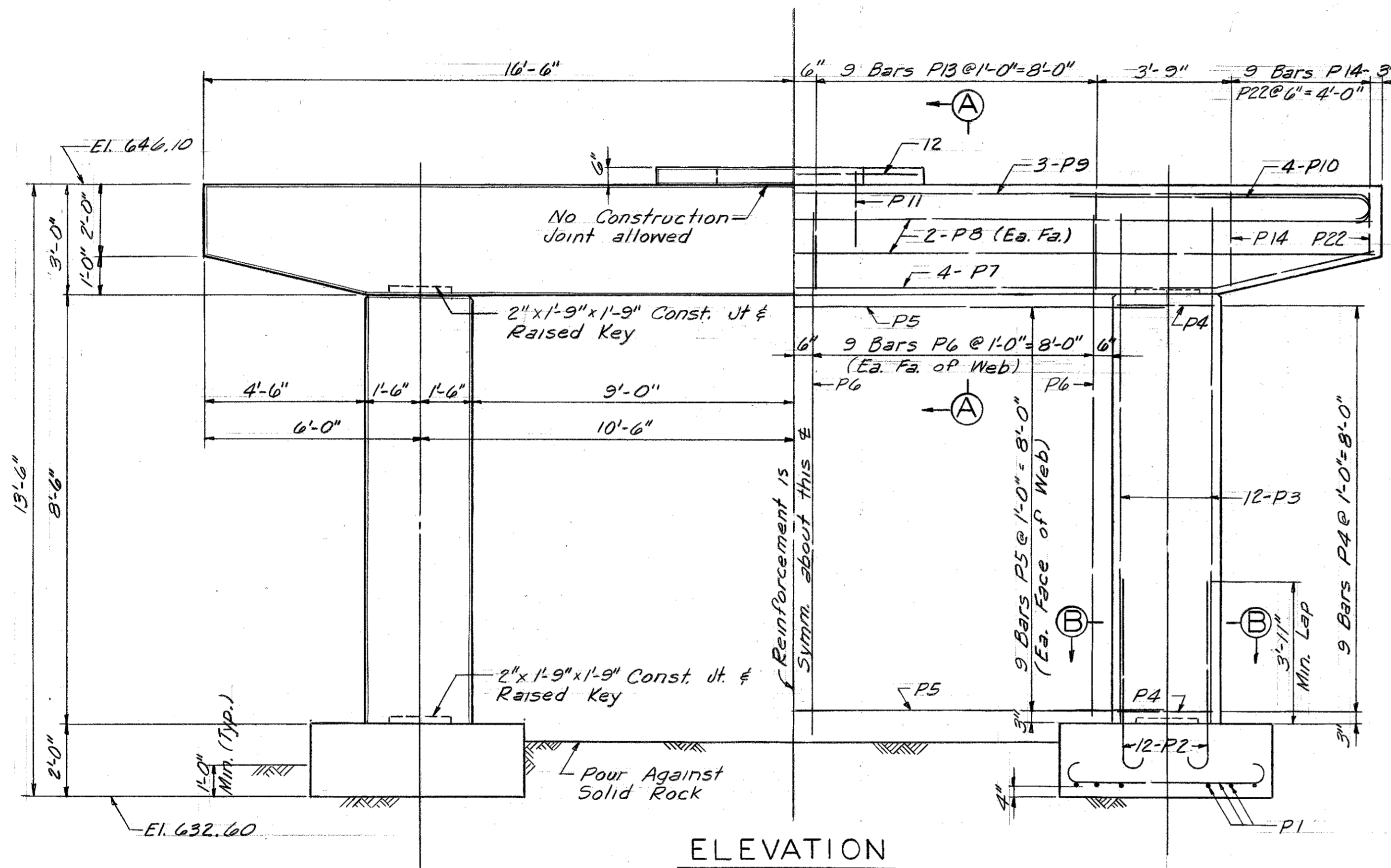
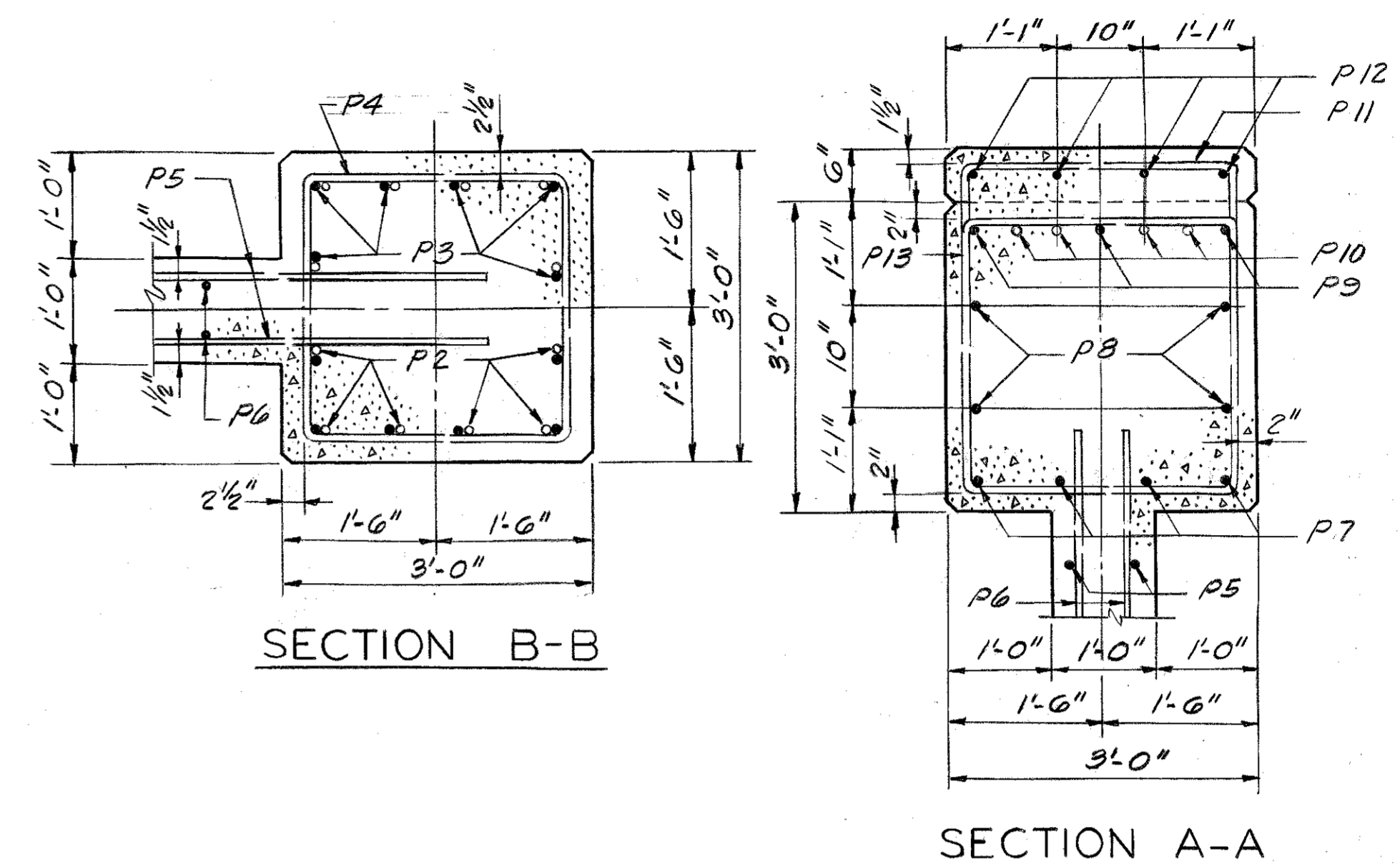
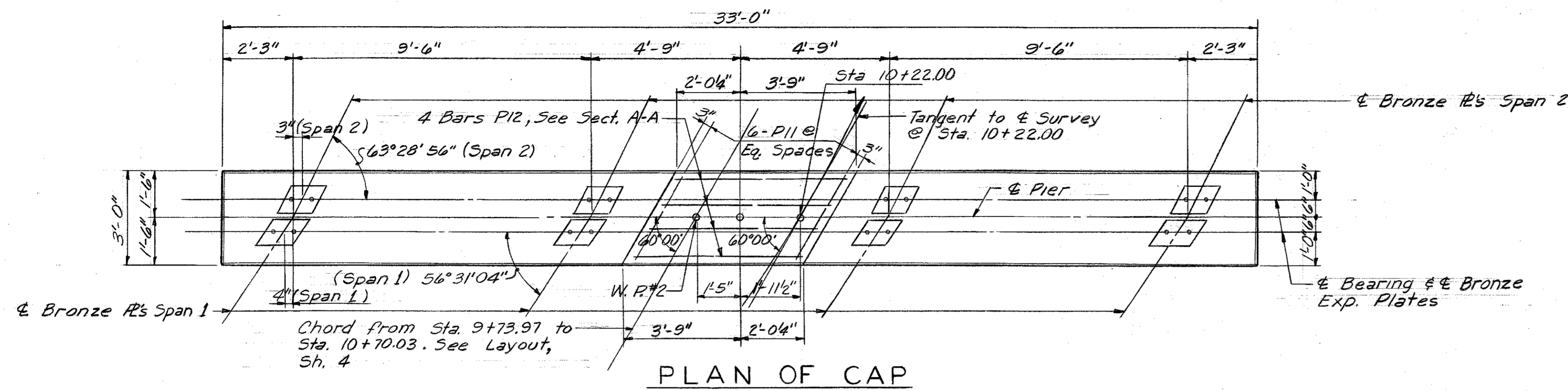
DESIGNED BY: PCW
 CHECKED BY: JES
 DATE: 5-67
 REVISION: PW
 DATE: 5-67
 TRACED BY: JSM

ABUTMENT NO. 2

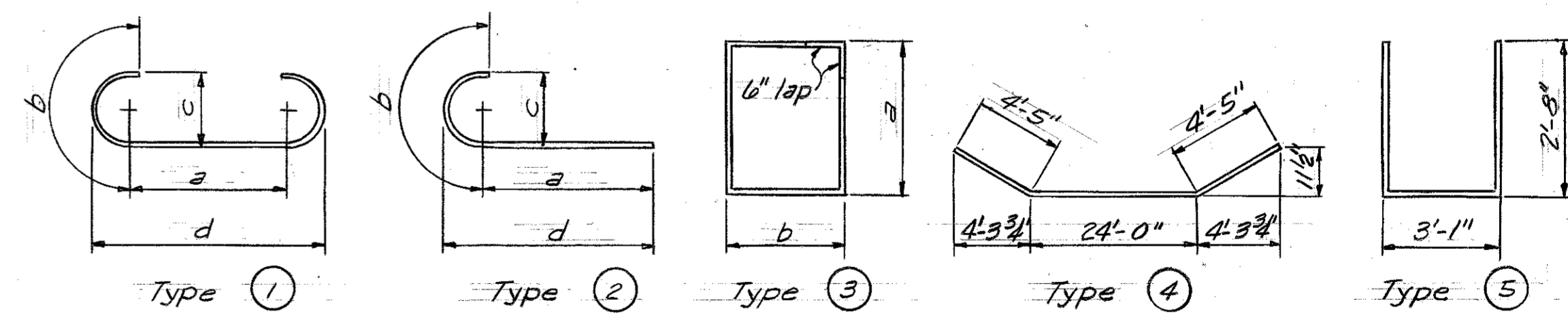
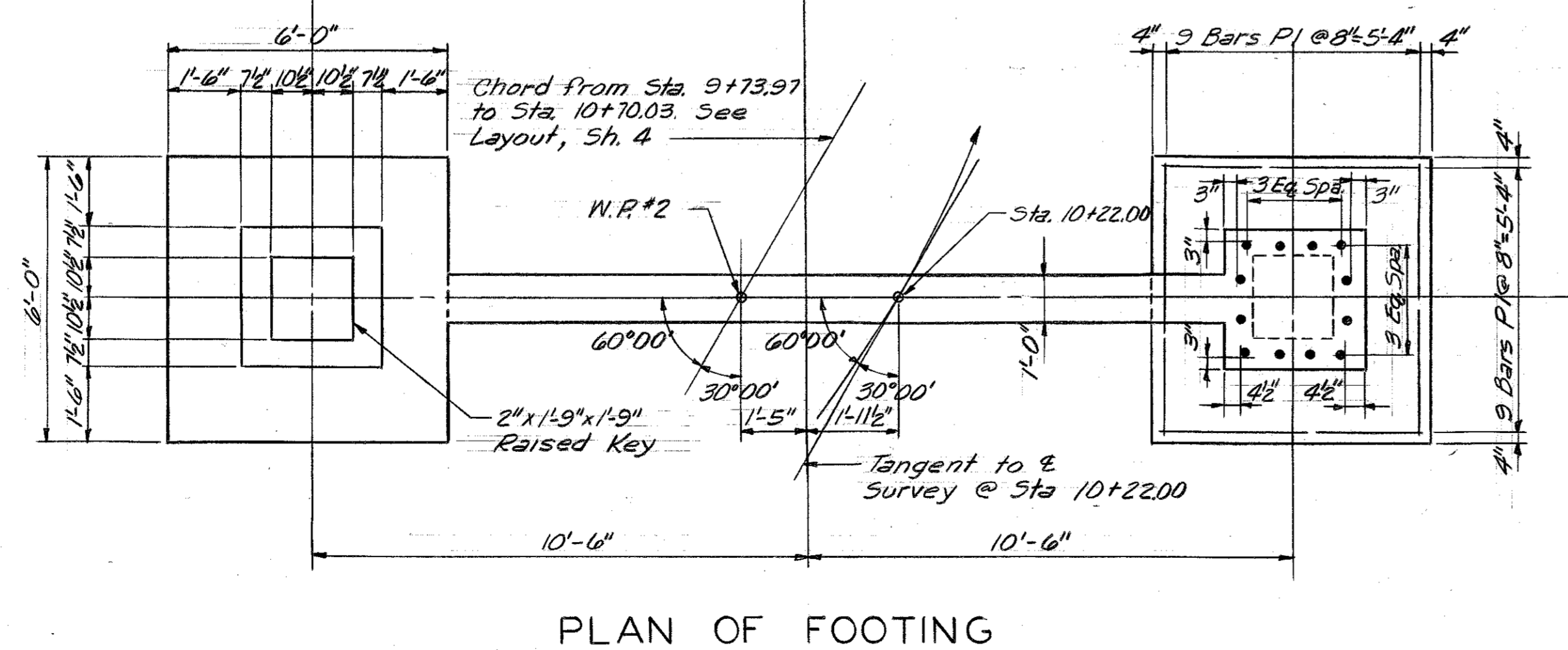
SUGAR CREEK RD. OVER E. FORK SUGAR CREEK - SHEET 10

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

STATION 10+22.00 PROJECT NO.
 BRIDGE NUMBER DRAWING NO. 17047 INDEX



| BILL OF REINFORCEMENT | | | | | | | | | | | | | | |
|-----------------------|------|-----|----------|--------|-----|---------------|-----|--------|-----|-----|-----|-----|----|-------|
| Mark | Type | No. | Bar Size | Length | | Location | a | | b | | c | | d | |
| | | | | Ft. | In. | | Ft. | In. | Ft. | In. | Ft. | In. | | |
| P1 | ① | 36 | 5 | 6 | 11 | Footing | 5 | 3 | 0 | 10 | 0 | 5 | 5 | 8 |
| P2 | ② | 24 | 7 | 6 | 4 | Column Dowels | 5 | 2 | 1 | 2 | 0 | 7 | 5 | 5 1/2 |
| P3 | Str | 24 | 7 | 11 | 0 | Column | | | | | | | | |
| P4 | ③ | 18 | 4 | 11 | 1 | Column Hoops | 2 | 7 | 2 | 7 | | | | |
| P5 | Str | 18 | 4 | 21 | 0 | Web Wall | | | | | | | | |
| P6 | " | 36 | 4 | 11 | 0 | " | | | | | | | | |
| P7 | ④ | 4 | 8 | 32 | 10 | Cap (Bottom) | | | | | | | | |
| P8 | Str | 4 | 6 | 32 | 8 | Cap (Sides) | | | | | | | | |
| P9 | ① | 3 | 11 | 35 | 6 | Cap (Top) | 31 | 6 | 2 | 0 | 1 | 2 | 32 | 8 |
| P10 | ② | 8 | 11 | 10 | 11 | " | 8 | 11 | 2 | 0 | 1 | 2 | 9 | 6 |
| P11 | ⑤ | 6 | 4 | 8 | 3 | Key | | | | | | | | |
| P12 | Str | 4 | 4 | 5 | 4 | " | | | | | | | | |
| P13 | ③ | 18 | 5 | 11 | 5 | Cap Stirrups | 2 | 8 | 2 | 8 | | | | |
| P14 | " | 2 | 5 | 11 | 4 | " | 2 | 7 1/2 | 2 | 8 | | | | |
| P15 | " | 2 | 5 | 11 | 1 | " | 2 | 6 | 2 | 8 | | | | |
| P16 | " | 2 | 5 | 10 | 11 | " | 2 | 5 | 2 | 8 | | | | |
| P17 | " | 2 | 5 | 10 | 8 | " | 2 | 3 1/2 | 2 | 8 | | | | |
| P18 | " | 2 | 5 | 10 | 5 | " | 2 | 2 | 2 | 8 | | | | |
| P19 | " | 2 | 5 | 10 | 3 | " | 2 | 1 | 2 | 8 | | | | |
| P20 | " | 2 | 5 | 10 | 0 | " | 1 | 11 1/2 | 2 | 8 | | | | |
| P21 | " | 2 | 5 | 9 | 9 | " | 1 | 10 | 2 | 8 | | | | |
| P22 | " | 2 | 5 | 9 | 6 | " | 1 | 8 1/2 | 2 | 8 | | | | |



ESTIMATE OF QUANTITIES

Concrete Class "A" 28.0 Cu. Yd.
Reinforcement 3795 Lbs.

SUGAR CK RD. OVER E FORK SUGAR CK. SHEET 12

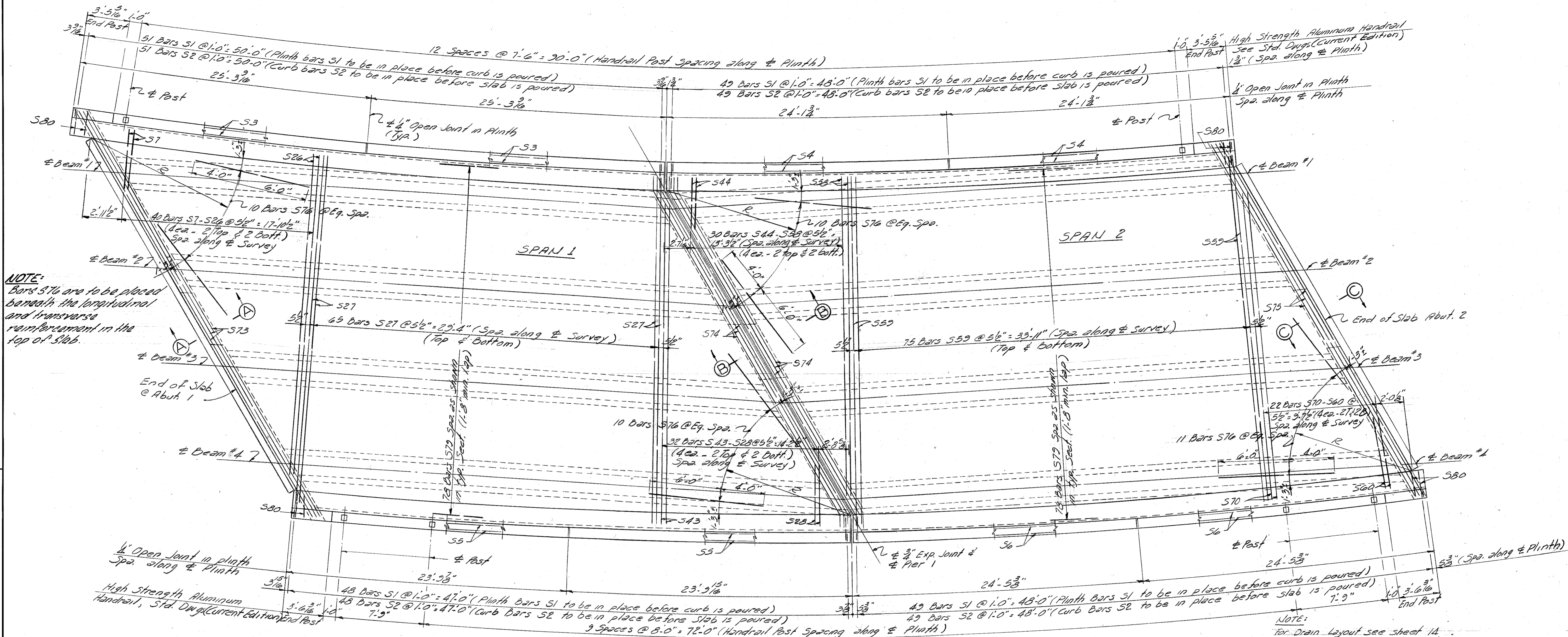
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF
GARRARD
SUGAR CREEK
ROAD

STATION 10+22.00 PROJECT NO.

BRIDGE NUMBER DRAWING NO. 17047 INDEX

PIER I

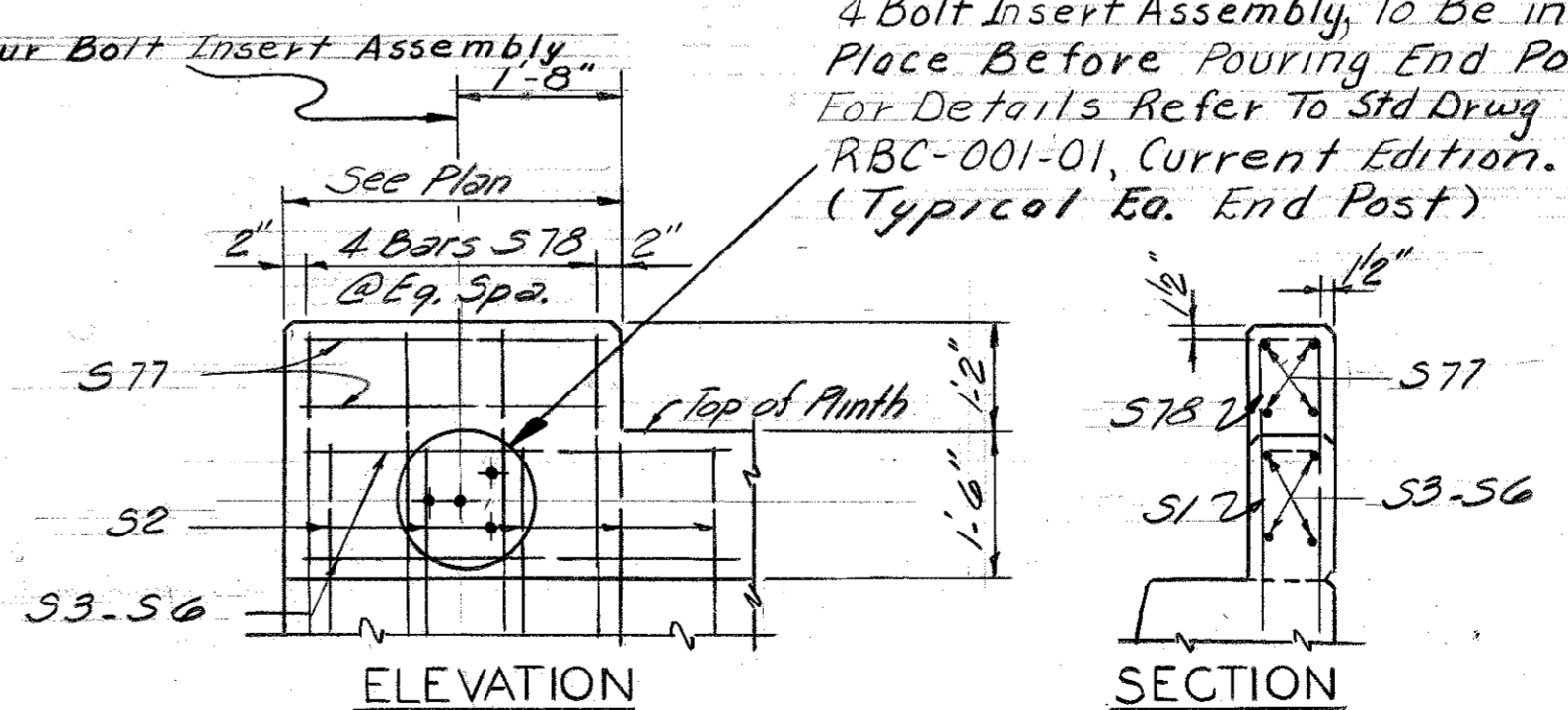
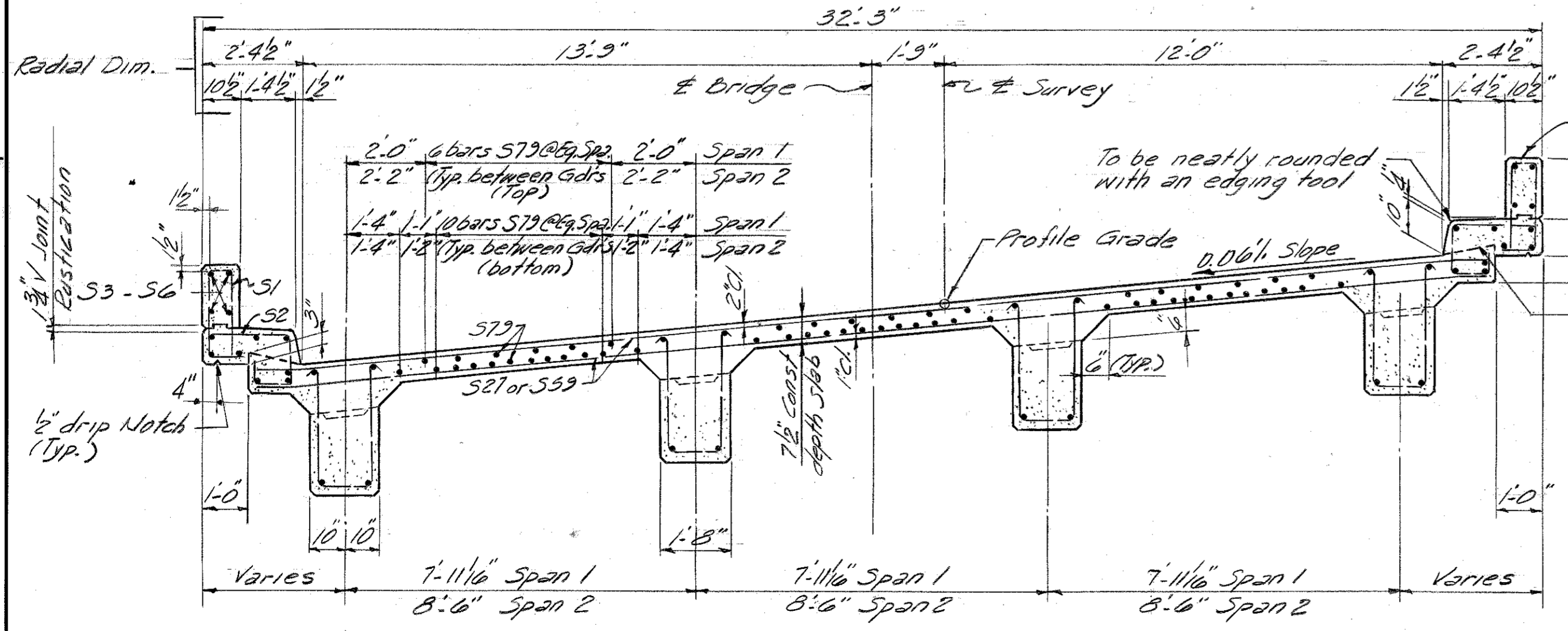
DESIGNED BY: JPO
CHECKED BY: TB
DATE: 5-67
REVISIONS:
DATE: 5-67
DATE: 5-67
DATE: 5-67



NOTE:
 Bars S76 are to be placed beneath the longitudinal and transverse reinforcement in the top of slab.

NOTE:
 For Drain layout see sheet 14.
 For Drain details see sheet 16.
 For location of dowels & Exp. Pts see substructure details & sheet 3.
 For Beam and Slab Layout see sheet 4.

PLAN



ESTIMATE OF QUANTITIES

| | |
|---------------------|----------------|
| Concrete, Class "A" | 173.9 Cu. Yds. |
| Reinforcement | 46,175 Lbs. |

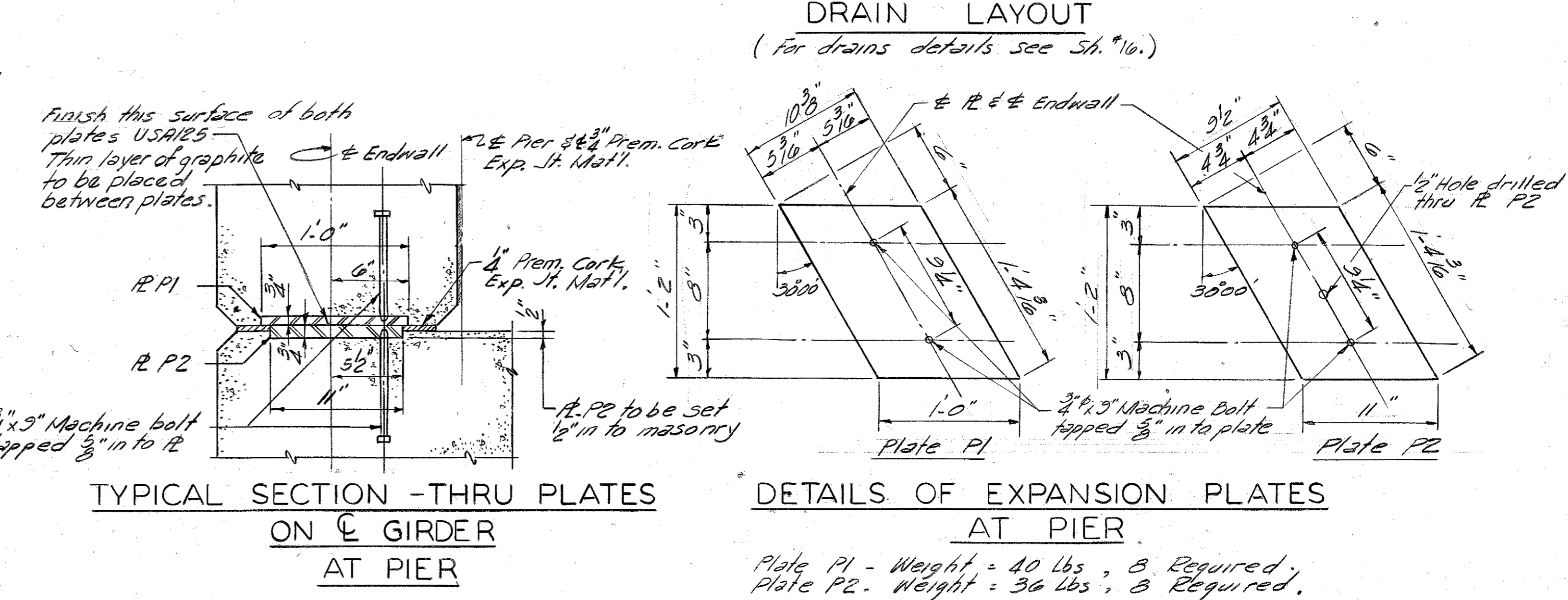
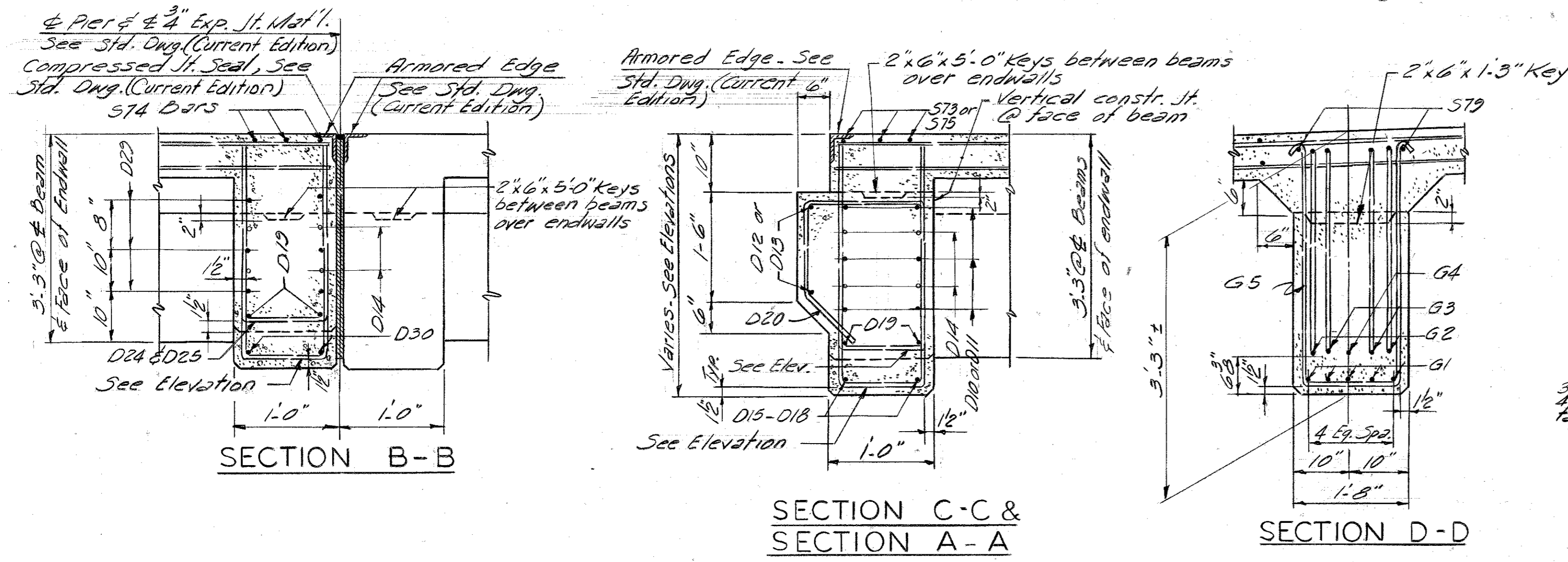
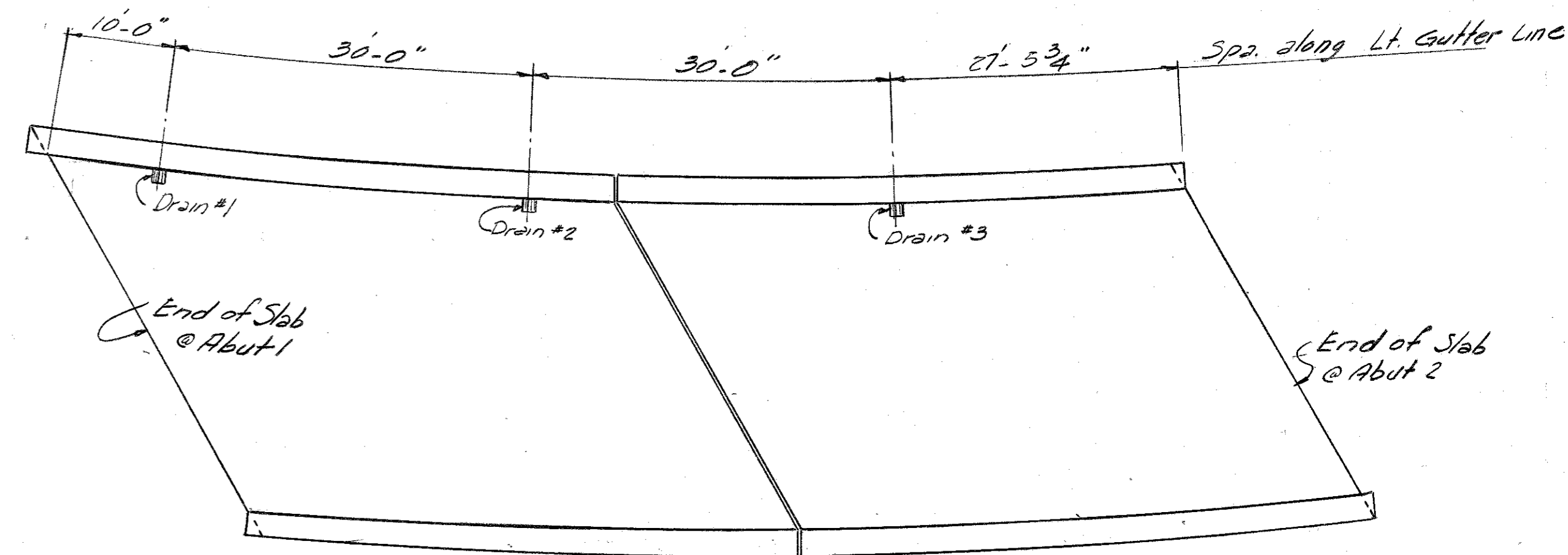
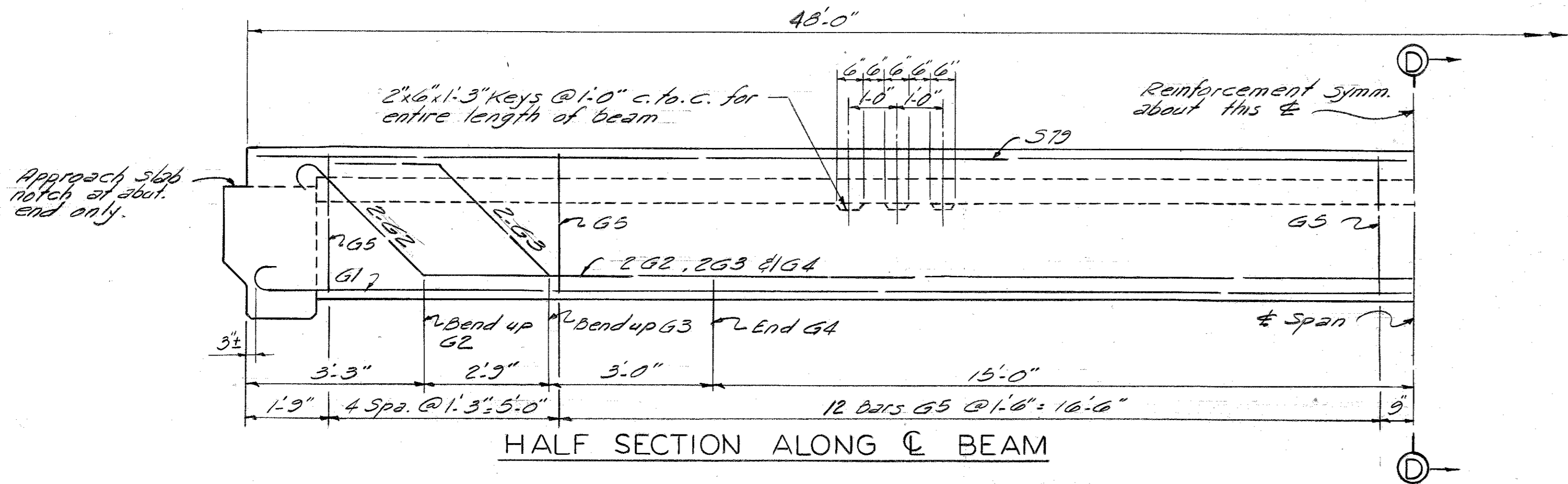
DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 5-10-71
 REVISIONS: [Table with dates and descriptions]

SUGAR CK. RD. OVER E. FORK SUGAR CK. SHEET 13

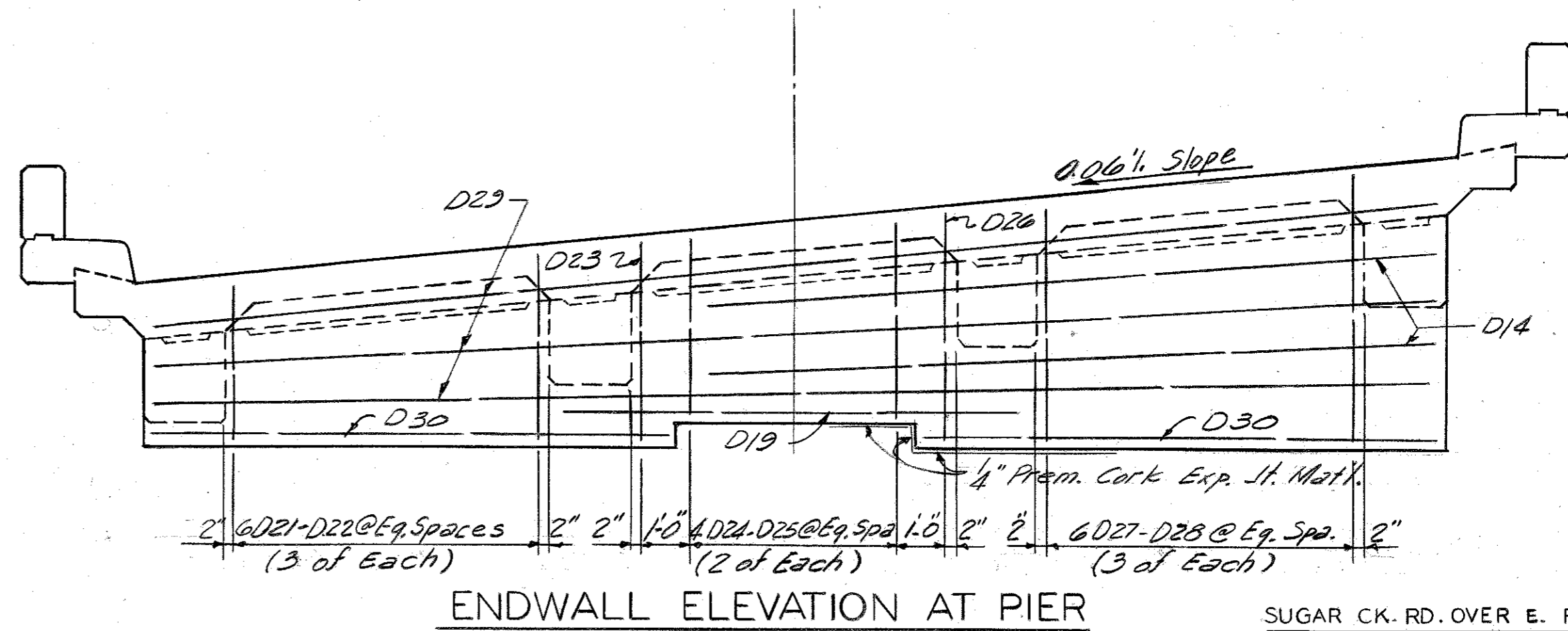
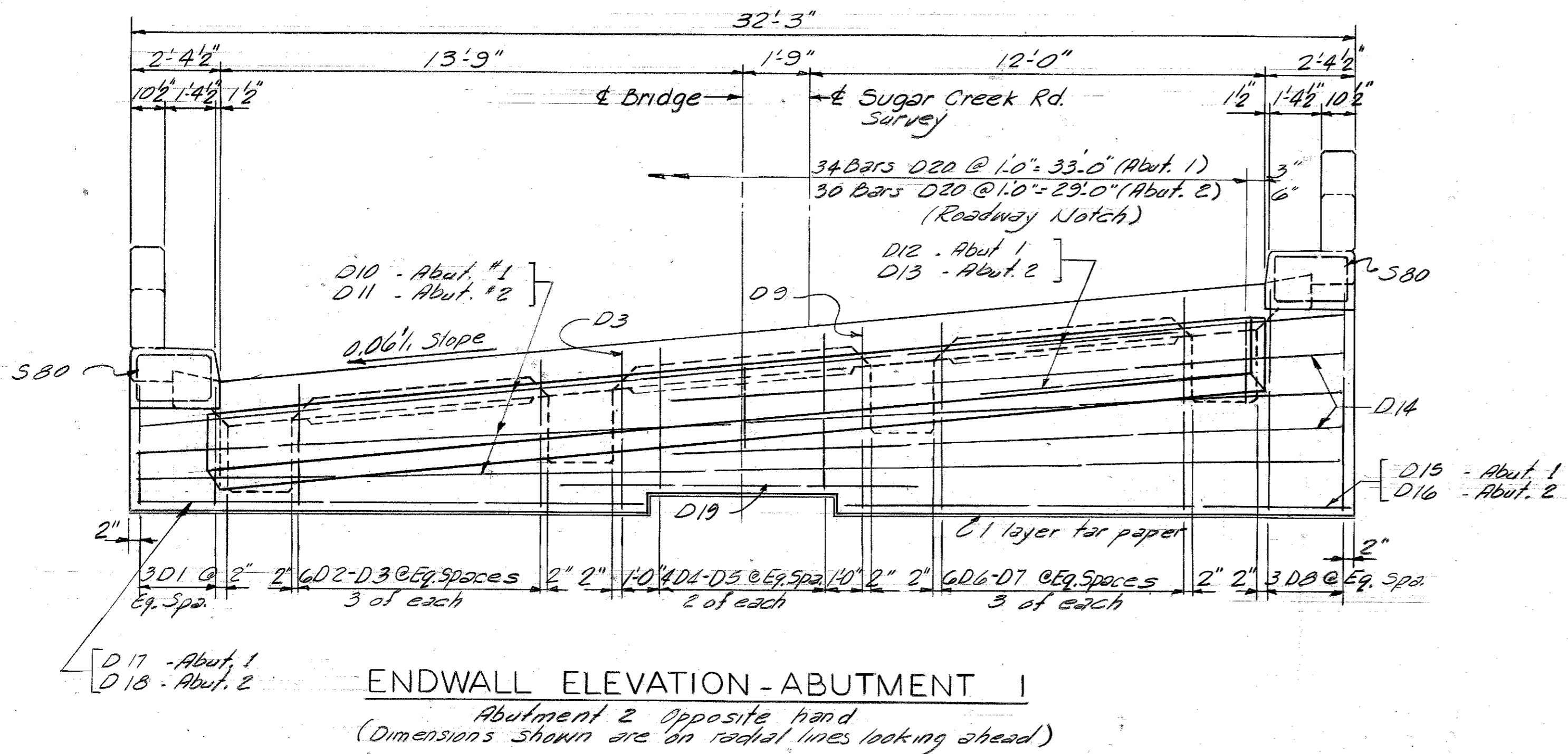
COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

| | | | |
|---------------|------------|-------------|-------|
| STATION | 10 + 22.00 | PROJECT NO. | |
| BRIDGE NUMBER | | DRAWING NO. | 17047 |
| | | INDEX | |

SUPERSTRUCTURE



DESIGNED BY: **CEP** DATE: 5-67
 CHECKED BY: **CEP** DATE: 5-67
 REVISIONS: 1. DATE: 5-67
 2. DATE: 5-67
 3. DATE: 5-67



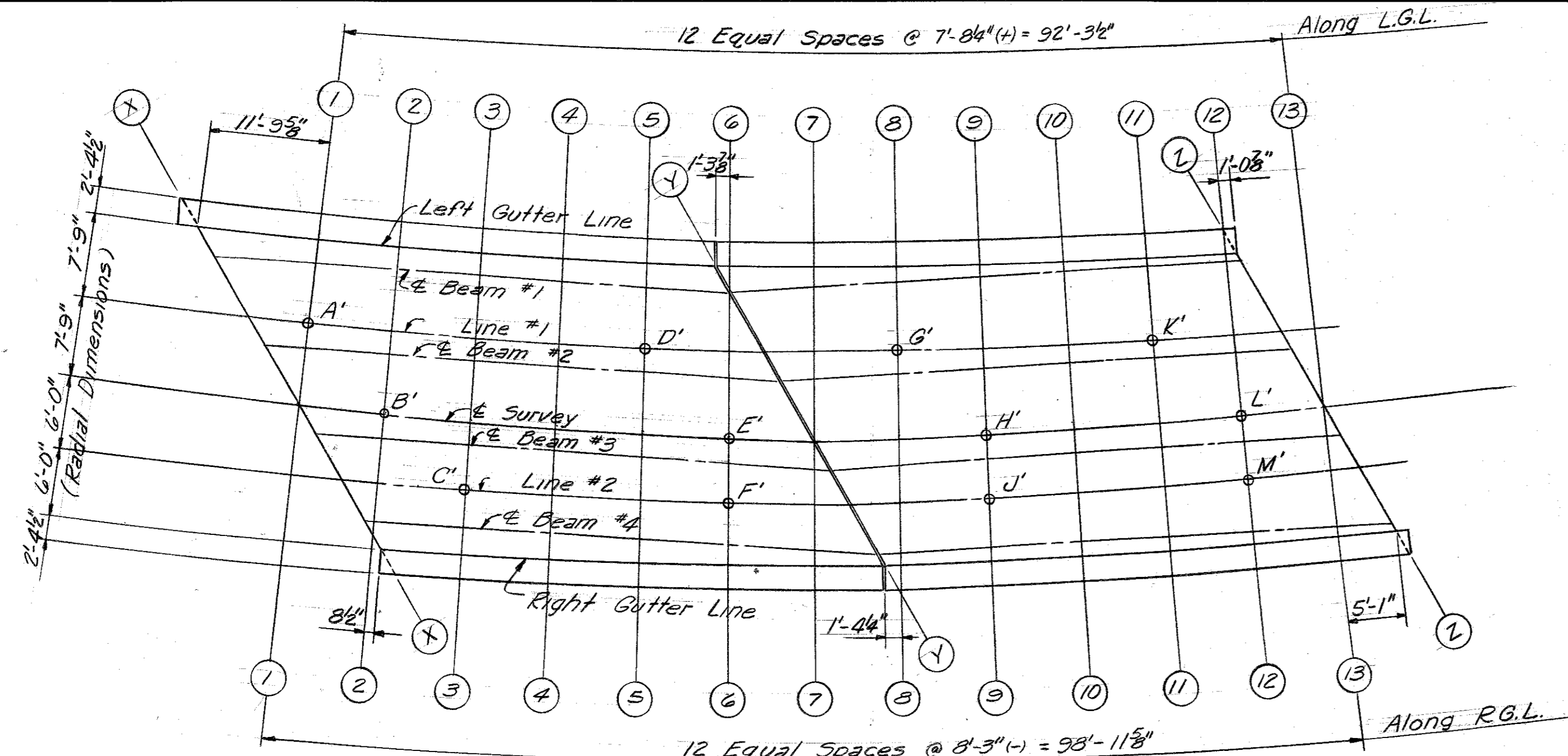
SUGAR CK. RD. OVER E. FORK SUGAR CK. SHEET 14

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

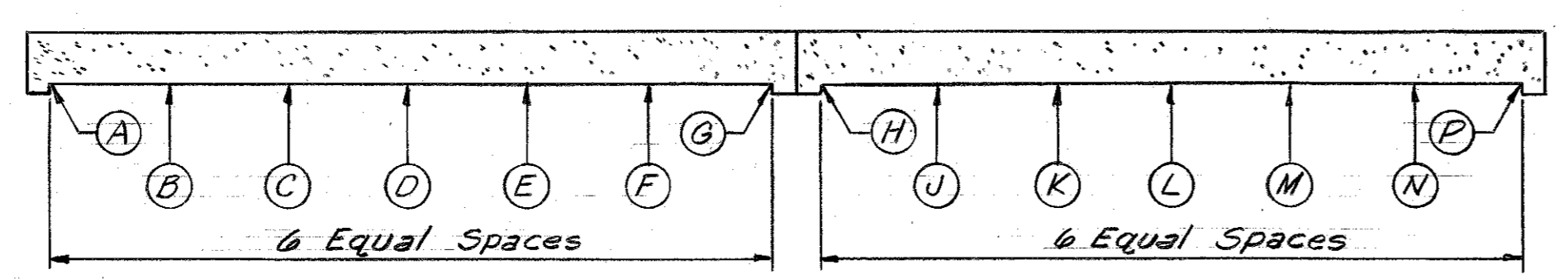
STATION 10 + 22.00 PROJECT NO. _____
 BRIDGE NUMBER _____ DRAWING NO. 17047 INDEX _____

SUPERSTRUCTURE

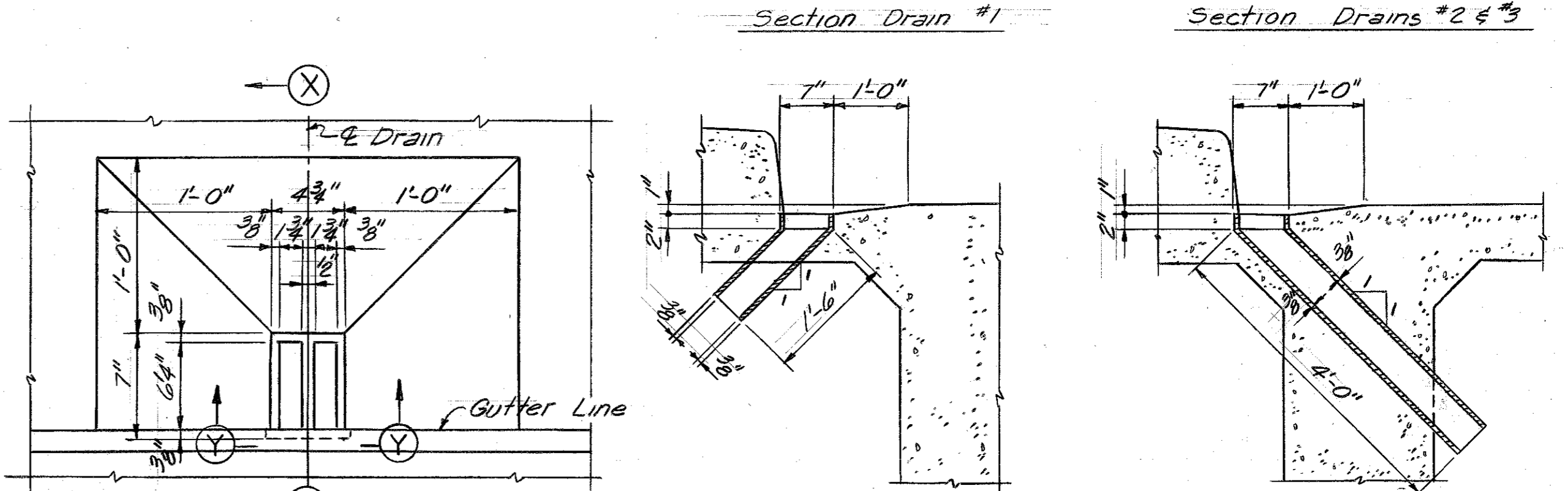
MICROFILMED-68



PLAN
(Showing Top of Slab Elevations)



SECTION ON C BEAM
(Showing Bottom of Beam Elevations)



PART PLAN
PART SECTION X-X
PART SECTION Y-Y

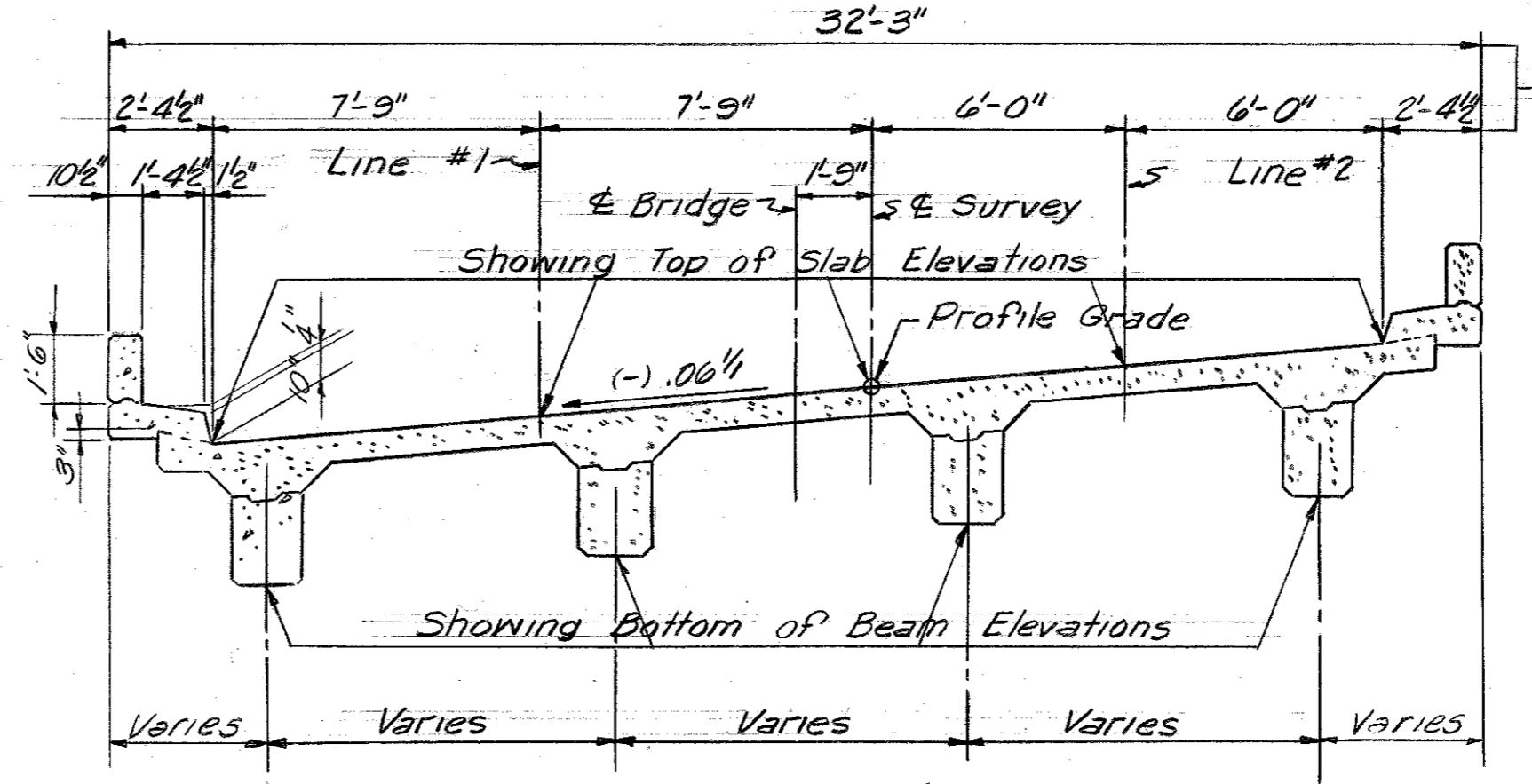
3-Cast Iron drains required. For spacing see sketch on sh. 14.
Foundry Note: All drains shall be gray iron castings, ASTM A48, Class 30A Report of field inspection of castings, current form, shall be submitted to the Division of Materials.

TABLE OF ELEVATIONS FOR CONTROL OF SLAB THICKNESS

| Check Points | Top of Slab Elev. | Bottom of Slab Elev. | Computed Slab Thick. |
|--------------|-------------------|----------------------|----------------------|
| A' | 649.678 | | |
| B' | 650.212 | | |
| C' | 650.639 | | |
| D' | 649.947 | | |
| E' | 650.470 | | |
| F' | 650.837 | | |
| G' | 650.141 | | |
| H' | 650.673 | | |
| J' | 651.029 | | |
| K' | 650.335 | | |
| L' | 650.859 | | |
| M' | 651.225 | | |

TABLE OF ELEVATIONS

| TOP OF SLAB | | | | | BOTTOM OF BEAM | | | | | |
|-------------|------------------|---------|----------|---------|-------------------|---------|---------|---------|---------|---------|
| Section | Left Gutter Line | Line #1 | E Survey | Line #2 | Right Gutter Line | Section | Beam #1 | Beam #2 | Beam #3 | Beam #4 |
| 1-1 | 649.223 | 649.678 | 650.133 | | | A | 646.041 | 646.540 | 647.041 | 647.540 |
| 2-2 | .293 | .754 | .212 | 650.564 | | B | .107 | .611 | .117 | .627 |
| 3-3 | .358 | .823 | .285 | .639 | 650.997 | C | .169 | .678 | .189 | .703 |
| 4-4 | .419 | .887 | .353 | .710 | 651.069 | D | .225 | .739 | .255 | .774 |
| 5-5 | .475 | .947 | .415 | .778 | .138 | E | .275 | .794 | .315 | .839 |
| 6-6 | .528 | .999 | .470 | .837 | .198 | F | .319 | .843 | .369 | .897 |
| 7-7 | .606 | 650.066 | .521 | .891 | .254 | G | .359 | .888 | .418 | .951 |
| 8-8 | .678 | .141 | .600 | .956 | .312 | H | .375 | .906 | .437 | .971 |
| 9-9 | .746 | .210 | .673 | 651.029 | .385 | J | .443 | .978 | .513 | 648.050 |
| 10-10 | .808 | .275 | .741 | .100 | .459 | K | .507 | 647.046 | .584 | .125 |
| 11-11 | .866 | .335 | .803 | .165 | .525 | L | .566 | .108 | .650 | .194 |
| 12-12 | | .390 | .859 | .225 | .585 | M | .618 | .164 | .709 | .257 |
| 13-13 | | | .910 | .283 | .639 | N | .664 | .214 | .763 | .314 |
| X-X | 649.103 | | 650.133 | | 650.923 | P | .707 | .260 | .814 | .369 |
| Y-Y | .516 | | .521 | | 651.296 | | | | | |
| Z-Z | .924 | | .910 | | .670 | | | | | |



TYPICAL SECTION

NOTE

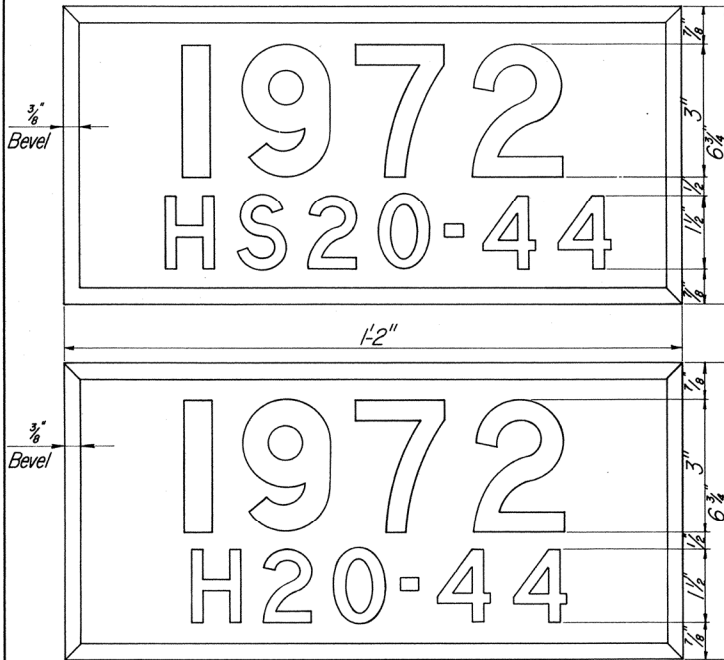
Elevations on this sheet include construction camber and are to be maintained with falsework in place. After the slab forms are erected and before the slab reinforcement is placed, the Resident Engineer shall take field elevations at the slab thickness check points and enter them in the table in the space provided. The slab thickness shall then be computed. If the computed thickness varies more than 1/4 from the plan thickness allowing 1/80 of the slab span for deflection of the form work, the form shall be adjusted until the computed slab thickness is within the tolerance allowed.

DESIGNED BY: DM
 CHECKED BY: FB
 TRACED BY:
 REVISED DATE: 5-67
 REVISED DATE: 5-67
 REVISED DATE:
 CE: B
 FW

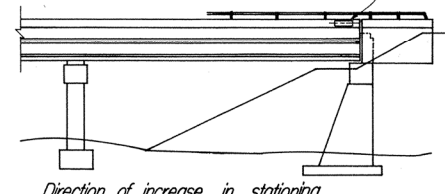
SUGAR CK RD. OVER EAST FORK SUGAR CK. SHEET 16

COMMONWEALTH OF KENTUCKY
 BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
GARRARD
 SUGAR CREEK
 ROAD

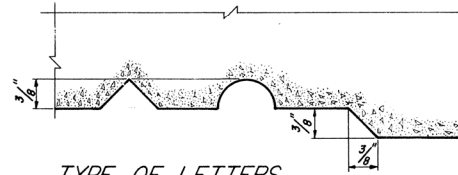
STATION 10+22.00 PROJECT NO.
 BRIDGE NUMBER 17047 DRAWING NO. INDEX



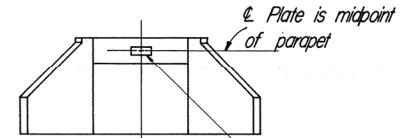
Locate stencil in this area or as directed by the Engineer



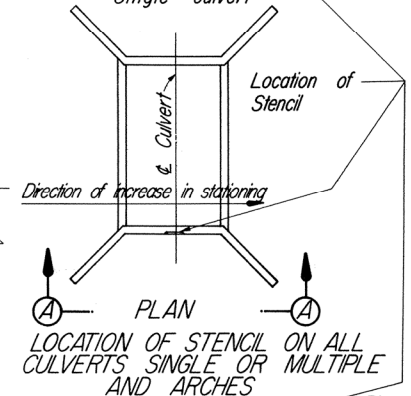
LOCATION OF STENCIL ON BRIDGES



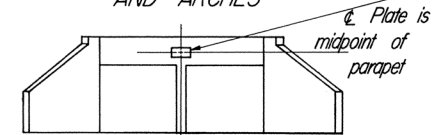
TYPE OF LETTERS



ELEVATION A-A
Single culvert



PLAN
LOCATION OF STENCIL ON ALL
CULVERTS SINGLE OR MULTIPLE
AND ARCHES



ELEVATION A-A
Multiple span culverts

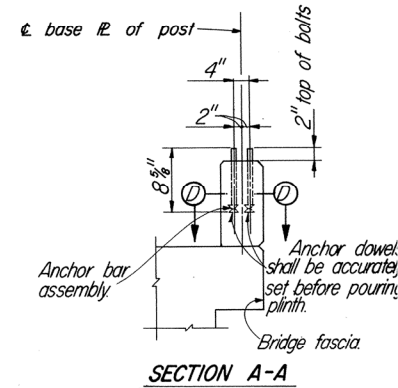
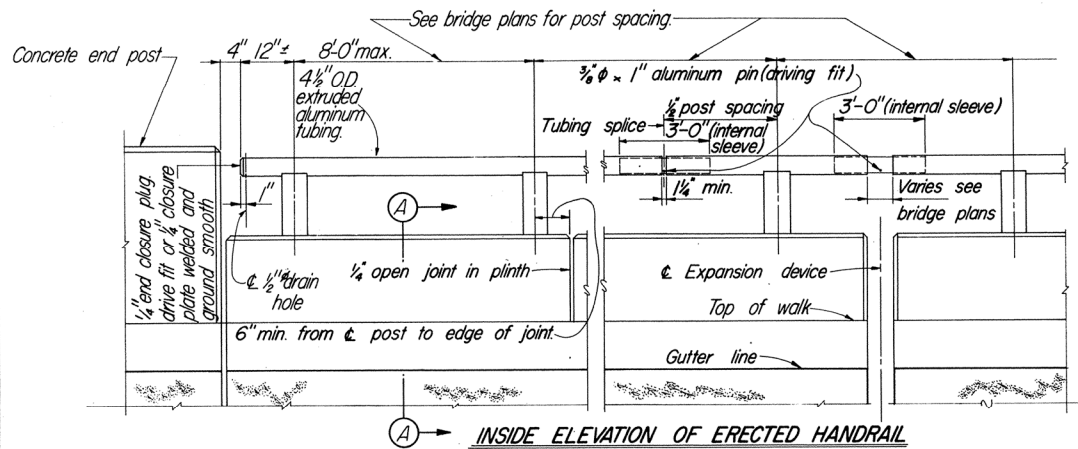
INSCRIPTION FOR STANDARD STENCIL
WHEN DATE ONLY IS USED. PLACE DATE IN CENTER OF PLATE

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions.
CONSTRUCTION DATE: Year shown on stencil shall be that in which Contract for Structure is executed. The stencils shall be used for all bridges and culverts in accordance with paragraph 404.3.1J of the Specifications. Stencil shall be made in a depressed panel approximately 6 3/4" x 3/8" x 1'-2" and having beveled edges. Stencil shall be made by the use of a plate with beveled edges and raised letters and figures. If structure is designed for loading other than shown above change to agree with design loading shown on plans. The stencil showing date and loading shall be used for all structures classified as bridges, except multispan culverts. The stencil showing date only shall be used for culverts with individual spans of less than 20 feet. The contractors' name plate, when required, shall be located in the near vicinity to the date plate, as directed by the Engineer.

DRAWN: J. S. [unclear] 12-71
 CHECKED: J. [unclear] 1-72
 RECOMMENDED: S. J. A. [unclear] 1-72

| | |
|-----------------------------------------------------------------|----------------------|
| KENTUCKY DEPARTMENT OF HIGHWAYS | |
| STENCIL CONSTRUCTION DATE FOR BRIDGES | |
| STANDARD DRAWING No. BGX-006 | |
| SUBMITTED: <u>C. [unclear]</u> DIRECTOR, DIVISION OF BRIDGES | DATE: <u>1/31/72</u> |
| APPROVED: <u>[unclear]</u> STATE HIGHWAY ENGINEER | DATE: <u>2/1/72</u> |



GENERAL NOTE:

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition with Revisions, AASHTO, ASTM and Aluminum Association Material Specifications, Current Editions, are also applicable as designated hereon.

DESIGN LOAD: As specified in the AASHTO Specifications, Current Edition.

SCOPE: In general, this drawing in conjunction with the specifications, covers the furnishing and erection of High Strength Aluminum Handrails on highway bridge structures. The additional plans required for each bridge are the bridge plans and the fabricator's shop detail plans.

FABRICATION:

GENERAL: Post spacing is governed by the details shown on the bridge plans. The end result shall be a continuous rail; with each rail section being attached to a minimum of three posts and with each joint being spliced as detailed hereon. Fabricator's shop detail plans, as required for each bridge, must be approved by the Department, and the Contractor is responsible for furnishing these plans to the Department for approval prior to fabrication.

APPEARANCE: Pieces having surfaces so scored or marked as to cause an objectionable appearance will be rejected.

CUTTING: All cuts are to be sawed and milled.

HOLES: All holes in castings shall be cored.

WELDING: Welding shall be done by an arc welding process in which no welding flux is used. Filler material for welding shall conform to AWS Specification A5.10-69.

ERECTION, MEASUREMENT AND PAYMENT:

ERECTION: Posts shall be set at right angles to the bridge fascia line and perpendicular to grade. The alignment of the railing shall be parallel to the fascia line. Special fabrication of curvature will be required when fascia lines are curved. U-shaped washer shims having a maximum thickness of 1/8" may be used under the posts to obtain desired alignment of post or rail. The void space under the posts shall be filled with alumilastic compound or an approved equal, so as to completely insulate the aluminum from the concrete.

MEASUREMENT: The work actually completed and accepted in place shall be measured along the rail in linear feet between ends.

PAYMENT: Payment will be made for the quantity measured as described above, at the contract unit price per linear foot and such payment shall be full compensation for all materials and work necessary for completion.

MATERIAL:

TUBING, SLEEVE AND CLAMPS: Shall meet the requirements of ASTM B221 alloy 6061-T6511 or alloy 6063-T6, using normal mill finish.

END CAST CLOSURE PLUG: Shall conform to ASTM B26 alloy S5B-F, ASTM B108 alloy S5B-F or Aluminum Association alloy A344-untreated.

POSTS: Cast aluminum posts shall be in accordance with AASHTO Designation M193-64 for Cast Aluminum Railing Post, using normal mill finish.

WASHERS: Cast aluminum washers shall be Aluminum Association alloy A344-T4 or ASTM B108 alloy S5B-F. Washer shims shall be in accordance with ASTM B209 alloy 1100 or alloy alloy 2024-T3. All other washers shall be ASTM B209 alloy alloy 2024-T3.

NUTS: All nuts shall be hexagon and shall comply with ANSI B18.2.2 for dimensions.

Aluminum Nuts shall be ASTM B211 alloy 6061-T6 or 6262-T9, American Standard finished hexagon, thick nuts, Class 2B thread.

Steel Nuts in the anchor bar assembly shall be ASTM A307, Grade A.

CAP SCREWS: Stainless steel screws shall conform to ASTM A276 type 302 or 304.

DOWELS: Stainless steel anchor dowels shall conform to ASTM A276 type 430 except that their ultimate strength shall be 100,000 psi. minimum. Threads shall be rolled.

ANCHOR CHANNEL BARS: Shall conform to ASTM A36.

MILL TEST REPORTS: Notarized mill test reports showing or statements certifying that the materials comply with the Specifications, shall be furnished in triplicate to the Department.

CLOSURE PLATE: Shall meet the requirements of ASTM B209 alloy 6061-T6.

DATE: 6-27-72
 DRAWN: J. J. [Signature]
 CHECKED: [Signature]
 RECOMMENDED: S. J. [Signature]

Work this drawing with Drawing No. BHA-006

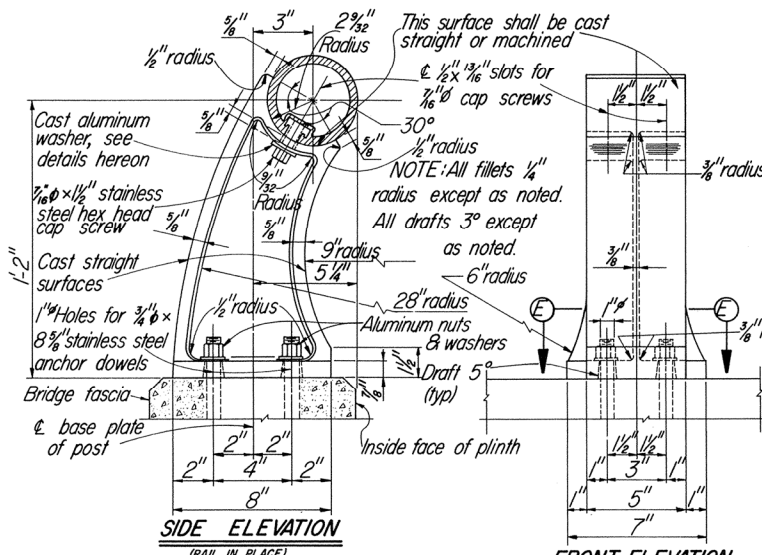
KENTUCKY
 DEPARTMENT OF HIGHWAYS

HIGH STRENGTH
 ALUMINUM HANDRAIL

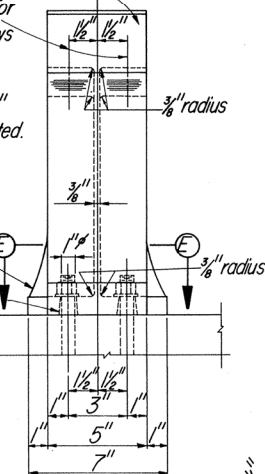
STANDARD DRAWING No. BHA-005

SUBMITTED: C. Lewis B. Cook, DIRECTOR, DIVISION OF BRIDGES, 6/30/72, DATE
 APPROVED: [Signature], STATE HIGHWAY ENGINEER, 7/5/72, DATE

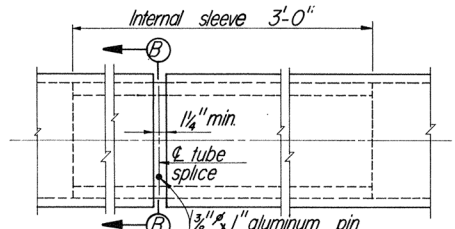
SPECIFICATIONS FOR BRIDGES
 RECOMMENDED BY THE DIVISION OF BRIDGES
 6-714



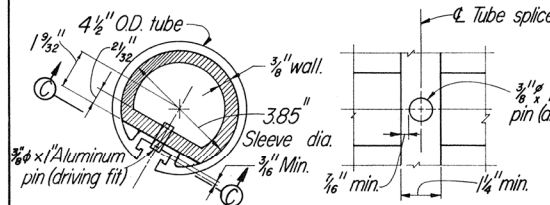
SIDE ELEVATION
(RAIL IN PLACE)



FRONT ELEVATION
(RAIL REMOVED)

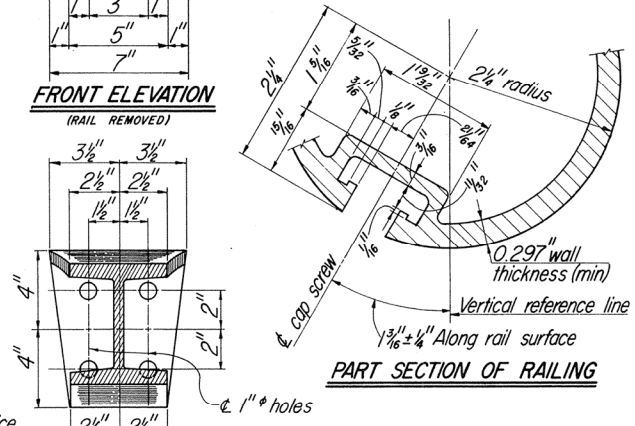


TUBE SPLICE DETAIL

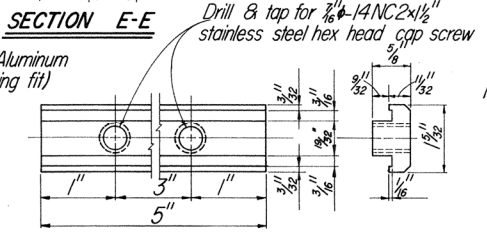


SECTION B-B
(Internal sleeve detail)

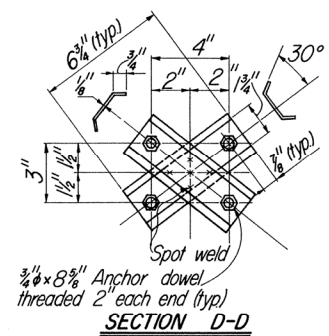
SECTION C-C



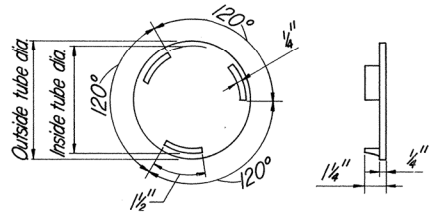
PART SECTION OF RAILING



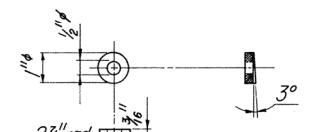
RAIL POST CLAMP BAR



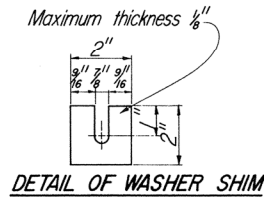
SECTION D-D



END CAST CLOSURE PLUG



CAST ALUMINUM WASHER DETAIL

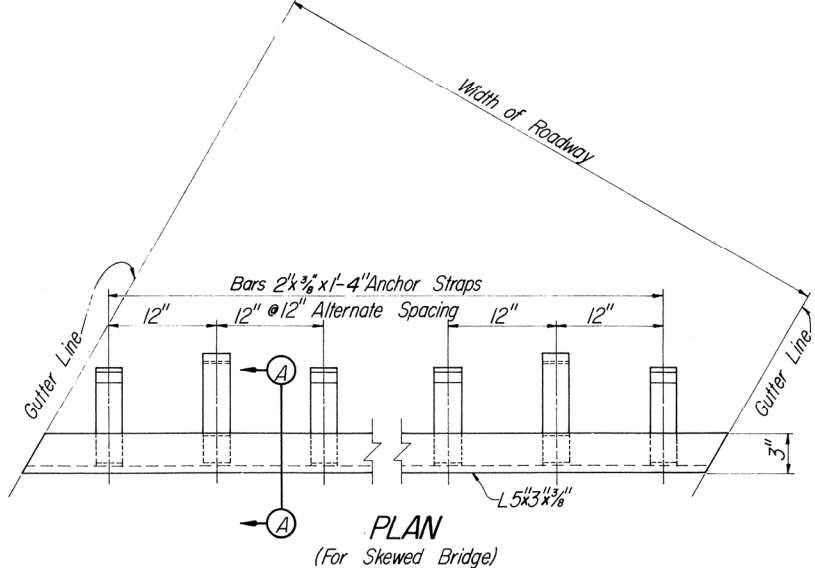
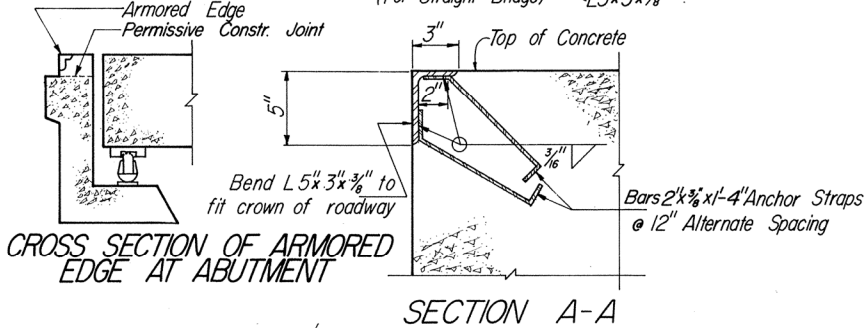
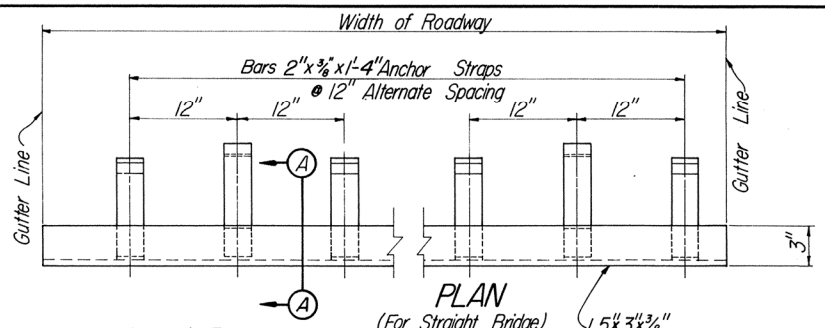


DETAIL OF WASHER SHIM

Work this drawing with Drawing No. BHA-005

| | |
|-------------------------------------------------------------|-----------------|
| KENTUCKY DEPARTMENT OF HIGHWAYS | |
| HIGH STRENGTH ALUMINUM HANDRAIL | |
| STANDARD DRAWING No. BHA-006 | |
| SUBMITTED <i>C. R. Cook</i> DIRECTOR DIVISION OF BRIDGES | 6/30/22 DATE |
| APPROVED <i>J. R. ...</i> STATE HIGHWAY ENGINEER | 7/6/22 DATE |

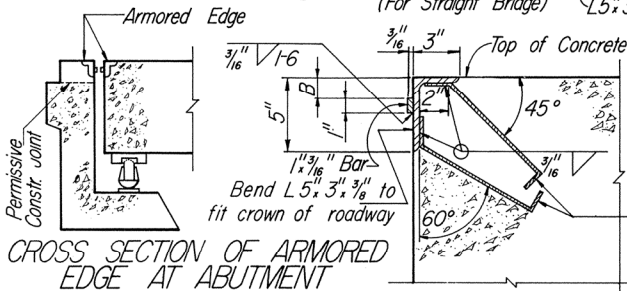
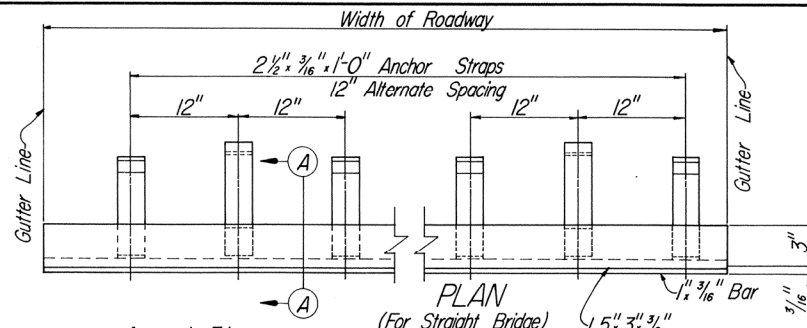
11-11
 CHECKED: W. B. BARTLE
 RECOMMENDED: S. J. BARTLE
 6-72
 4-72



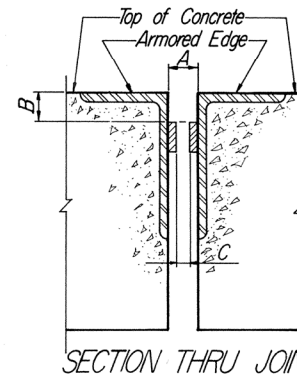
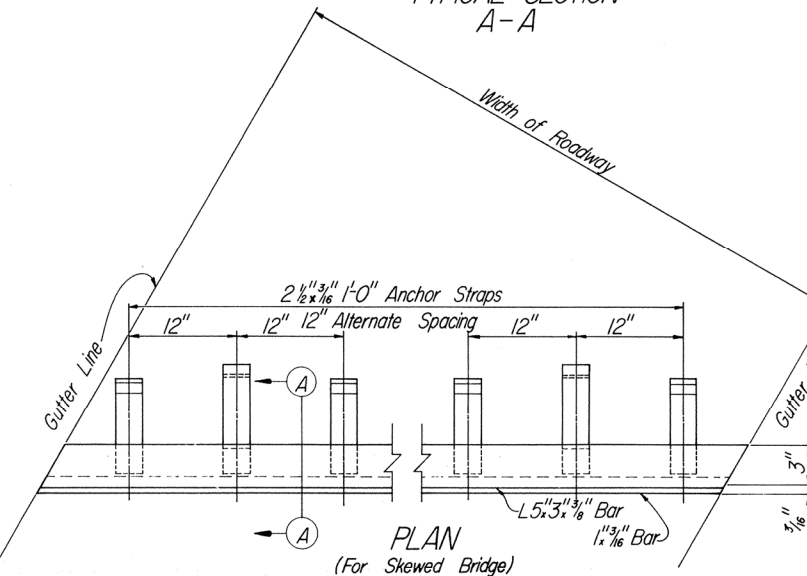
GENERAL NOTES

- SPECIFICATIONS:** The Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions.
PAINT: All structural steel shown on this sheet shall be cleaned and painted in accordance with the Special Provision for Blast Cleaning and Painting Structural Steel.
WELDING SPECIFICATIONS: All welding materials, welding techniques and welding procedure shall comply with American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.
WELDING AND WELDING MATERIAL: The cost of welding, welding material and labor to be included in the lump sum bid for structural steel.
MILL TEST REPORTS: Notarized statements in triplicate shall be furnished the Department of Highways showing that all structural steel furnished meets the specifications.
SHOP DETAIL PLANS: The contractor shall submit shop detail plans for approval prior to fabrication in accordance with plans and specifications.
ANCHOR STRAPS: When armored edge is used in conjunction with expansion dam, the location of 2" x $\frac{3}{8}$ " x 1'-4" anchor straps should be spaced not to interfere with anchor straps located on expansion dam.
MATERIAL SPECIFICATION: Steel material shall conform to A.S.T.M. designation A36.
PAYMENT: The cost of furnishing and placing armored edge shall be included in the lump sum bid for Structural Steel.
LOCATION: The location of armored edge shall be shown on the detail plans.
WEIGHT: Weight per foot of assembly = 11.39 lbs.

| | | |
|------------------------------------------------------------------------|------------------------|--|
| KENTUCKY DEPARTMENT OF HIGHWAYS | | |
| ARMORED EDGE FOR CONCRETE | | |
| STANDARD DRAWING No. BJE-001 | | |
| SUBMITTED <u>C. Charles S. Cook</u> DIRECTOR DIVISION OF BRIDGES | DATE <u>6/30/72</u> | |
| APPROVED <u>J. R. Harrison</u> STATE HIGHWAY ENGINEER | DATE <u>7/9/72</u> | |



| Joint | | Size |
|--------|--------|--------|
| A | B | C |
| 3/4" | 1 1/8" | 3/8" |
| 1" | 2 3/8" | 5/8" |
| 1 1/4" | 2 3/4" | 7/8" |
| 1 5/8" | 3 3/8" | 1 1/4" |



GENERAL NOTES

SPECIFICATIONS: The Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions.

PAINT: All structural steel shown on this sheet shall be cleaned and painted in accordance with the Special Provision for Blast Cleaning and Painting Structural Steel.

WELDING SPECIFICATIONS: All welding materials, welding techniques and welding procedure shall comply with American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

WELDING AND WELDING MATERIAL: The cost of welding, welding material and labor to be included in the lump sum bid for structural steel.

MILL TEST REPORTS: Notarized statements in triplicate shall be furnished the Department of Highways showing that all structural steel furnished conform to the specifications.

SHOP DETAIL PLANS: The contractor shall submit shop detail plans for approval prior to fabrication in accordance with specifications.

GENERAL NOTES (CONT'D.)

ANCHOR STRAPS: When armored edge is used in conjunction with expansion dam, the location of 2 1/2" x 3/16" x 1'-0" anchor straps should be spaced not to interfere with anchor straps located on expansion dam.

MATERIAL SPECIFICATION: Steel material shall conform to A.S.T.M. designation A36.

PAYMENT: The cost of furnishing and placing armored edge shall be included in the lump sum bid for Structural Steel.

LOCATION: The location of armored edge shall be shown on the detail plans.

WEIGHT: Weight per foot of assembly *24.06 lbs per foot*

JOINT SIZE: This drawing to be used only with Joints 3/4" or larger.

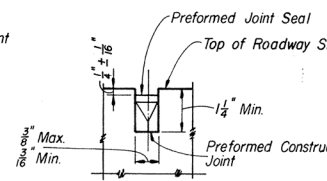
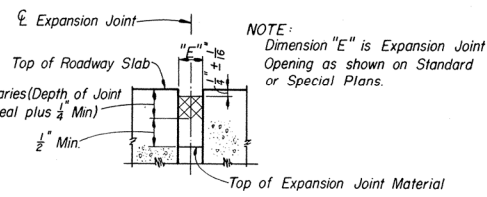
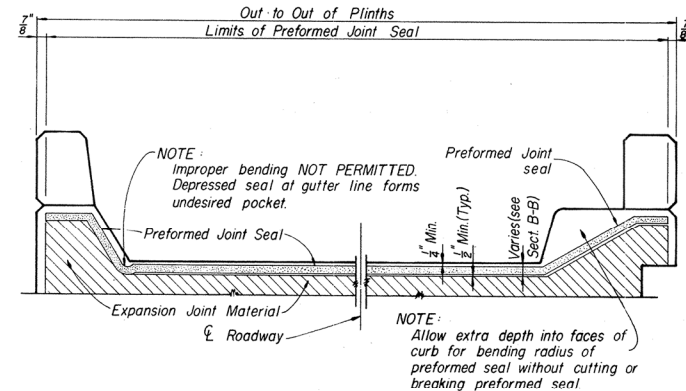
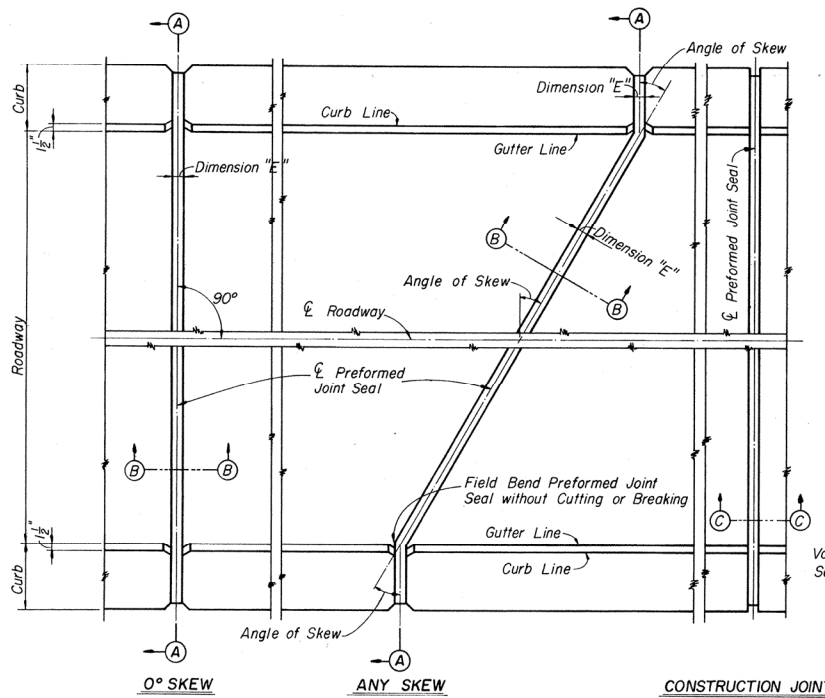
KENTUCKY
DEPARTMENT OF HIGHWAYS

ARMORED EDGE FOR
JOINTS IN CONCRETE

STANDARD DRAWING No. BJE-002

SUBMITTED *C. L. Cook* 6/20/72
DIRECTOR, DIVISION OF BRIDGES DATE

APPROVED *J. L. Harrison* 7/6/72
STATE HIGHWAY ENGINEER DATE



PART PLAN-EXPANSION JOINTS

GENERAL NOTES

SPECIFICATIONS: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, Current Edition with revisions.
JOINT TREATMENT: All joints shall be sealed with Preformed Compression Joint Seal as set forth in Special Provision No. 37, current edition. The Special Provision governs material requirements, sampling and testing, joint preparation, application, measurement and payment.
CONSTRUCTION JOINTS: Transverse construction joints shall not be placed in the slab unless shown on the plans or directed by the Engineer and then only in the location and size specified. When a transverse construction joint is needed, the joint shall be sawed or formed and shall be true to alignment and have vertical faces.
EXPANSION JOINTS: The size of joints specified either on Standard Drawings or on plans shall be of the size shown in Special Provision No. 37, current edition, for Preformed Compression Joint Seals.

| | |
|------------------------------------------------------------------------|------------------------|
| KENTUCKY DEPARTMENT OF HIGHWAYS | |
| PREFORMED JOINT SEAL DETAILS FOR CONCRETE BRIDGE FLOORS | |
| STANDARD DRAWING No. BJJ-003 | |
| SUBMITTED | C. Baker & Co. 7/13/22 |
| DIRECTOR DIVISION OF BRIDGES DATE | |
| APPROVED | J. L. Anderson 7/14/22 |
| STATE HIGHWAY ENGINEER DATE | |

RECOMMENDED S. J. A. MATTO 7-27

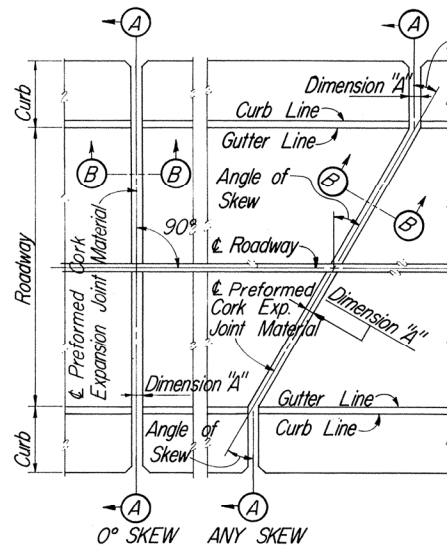
GENERAL NOTES

SPECIFICATIONS: The Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions.

CONSTRUCTION NOTE: This drawing is to be used in conjunction with standard or special plans for concrete floors on bridges when so noted on the standard or special plans. The joint between the spans shall have the preformed cork filler so placed as to prevent contact of concrete between spans and to provide the full width of joint shown on plans. The preformed cork filler shall be accurately placed and rigidly held in correct position. The cork filler on the roadway and curbs shall be trimmed or placed below the concrete surface a distance equal to dimension "B" as shown in Table "X". Joint shall be sealed as required on plans. No direct payment will be made for material or installation of cork filler. The cost of material and installation shall be included in the unit price bid for Class "A" Concrete.

PREFORMED CORK EXPANSION JOINT MATERIAL: Preformed cork filler shall conform to AASHTO Specification M153, Type II, current edition.

FORMING SEALER SPACE AT TOP OF JOINT: Top edges of concrete shall not be rounded. To obtain sharply defined joint edges employ, at top of joint, a dummy form smoothly finished on all sides and oiled for ease of removal.

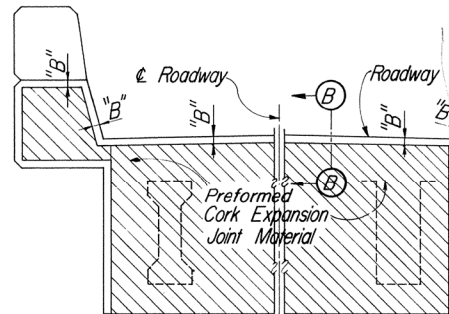


PART PLAN - EXPANSION JOINTS

PART SECTION B-B

Dimension "A" is Expansion Joint opening as shown on standard or special plans. This dimension is to be used as thickness of Preformed Cork Expansion Joint Material.

| TABLE "X" | |
|------------|--------|
| Joint Size | "B" |
| 1/2" | 2" |
| 3/4" | 1 1/2" |
| 1" | 2 1/4" |
| 1 1/4" | 2 5/8" |
| 1 5/8" | 3" |
| 1 7/8" | 3 3/4" |
| 2 1/4" | 3 3/4" |

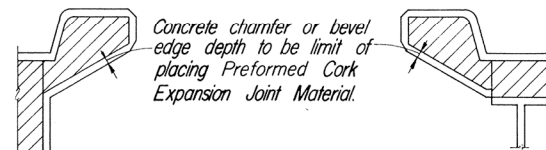


PART ELEVATION A-A
(For Concrete Deck Girder Span)

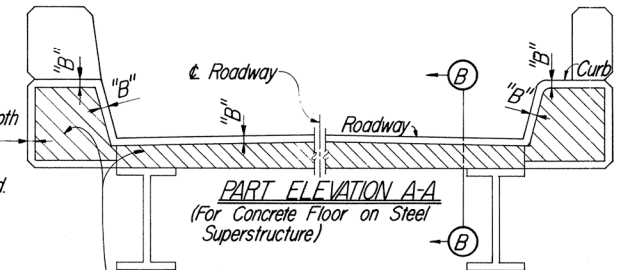
Preformed Cork Expansion Joint Material of the thickness shown on plans to be used in joint over area shown as shaded above. Joint to be left open in unshaded areas not required to be sealed.

Concrete chamfer or bevel edge depth to be limit of placing preformed Cork Expansion Joint Material. Allow extra depth when preformed seal is being used.

NOTE: When working this drawing with Standard Drawing BJJ-002, dimension "B" at vertical faces of curbs is to be increased to allow for bending radius of preformed seal.



CURB WITH UNDERSIDE SLOPE



PART ELEVATION A-A
(For Concrete Floor on Steel Superstructure)

KENTUCKY DEPARTMENT OF HIGHWAYS

PREFORMED CORK EXPANSION JOINT MATERIAL DETAILS FOR CONCRETE BRIDGE FLOOR

STANDARD DRAWING No. BJJ-004

| | | |
|-----------|-------------------------------------------------|---------|
| SUBMITTED | C. K. Lewis, Jr., Director, Division of Bridges | 7/13/72 |
| APPROVED | A. X. [Signature], State Highway Engineer | 7/13/72 |